

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LII.

SATURDAY, FEBRUARY 25, 1888.

No. 8.

ORIGINAL LECTURES.

EXTRACTION OF CATARACT WITHOUT AN IRIDECTOMY.

A Clinical Lecture delivered at the Garfield Hospital, before the Post-graduate School of Ophthalmology.

BY SWAN M. BURNETT, M.D.

PROFESSOR OF OPHTHALMOLOGY AND OTOLGY IN THE UNIVERSITY OF GEORGETOWN; OPHTHALMIC AND AURAL SURGEON TO THE GARFIELD HOSPITAL, AND DIRECTOR OF THE EYE AND EAR CLINIC AT THE CENTRAL DISPENSARY, WASHINGTON, D. C.

GENTLEMEN: That wise man and emperor, Marcus Aurelius, found out, nearly nineteen hundred years ago, that the "World is only change and life only opinion." The experience of the succeeding centuries has in no way invalidated the truth of this observation, whether as applied to life in general or to things in particular. Change is the order of to-day, as it always has been, and always will be until a stable equilibrium is reached between man and his environment. Certainly, in the art of medicine, this is too apparently true to need any argument for its substantiation. The only point then that should interest us, as practitioners of this art, is whether proposed changes are in the direction of progress or retrogression. Certainly, all change is not progress, and yet it cannot be doubted that most changes in medicine are associated with a loss of some error, or the further elucidation of some hitherto obscure truth.

Ophthalmic surgery, like all other arts, and particularly the arts based on scientific knowledge, has had its periods of activity and repose. Anything like a complete survey of these changes is, however, beyond the range of the purpose of this lecture, the object of our particular interest at this time being the present status of the operation for the extraction of cataract. From the time of Daviel's grand achievement to the present, there has been only one marked innovation in the methods of extracting cataracts. Up to v. Gräfe's time extractions were made, whether by instruments or otherwise, through a corneal incision made by a triangular-shaped knife. Occasionally a bold spirit would make some slight deviation from the established procedure, but the encouragement he received was scant, and at the period when the genius of v. Gräfe was thrown on the world, the "flap" extraction through an intact pupil had become classical. When we consider the tremendous superiority of the results obtained by this method over those following reclinatio, it is no wonder that there was an indisposition to change, and a general feeling of content with "well enough."

All the factors leading to this marked change in the method of extraction may not be altogether clear now, but that it followed in the train of the prevailing opinions of the period, is quite certain. No innovation so radical as this ever comes about suddenly. It may come as a

climax, but its antecedent accumulating causes are usually not far to seek. The association of iridectomy with cataract extraction, was most probably the outcome of v. Gräfe's experience in the therapeutic value of excision of a piece of the iris in glaucoma and other morbid conditions of the eye. He adopted it as a part of his method in order to forestall certain complications and ill results which had hitherto lain in the way of the best results. At that time iridectomy had achieved such marvellous success in glaucoma, and its application was pushed into so many and such diverse fields of therapeutics, that there was danger of oculists becoming simply iridectomists. One eminent London surgeon, it was said, thought it a dull day when he made less than half a dozen iridectomies in his private practice alone.

But a truly great mind like v. Gräfe's would not be led away by a mere fashion, and particularly by one which he had himself instituted. He had, undoubtedly, the prophylactic power of iridectomy in view when he adopted it as a part of his method, but there were other reasons inherent in the method itself which rendered it apparently necessary. The extreme peripheral position of the incision, which he adopted for the purpose of making it as nearly linear as possible, and to lessen the chances of corneal suppuration which was the cause of the loss of so many eyes in the old flap method, made a prolapse of the iris almost a matter of course. This, and the evil consequences which would almost surely follow, could be avoided only by making an excision of the iris, corresponding in extent, or nearly so, with the corneal incision.

The extremely satisfactory results of this "peripheral linear method" as v. Gräfe called it, together with the great weight of authority of its originator, established it as firmly among operators as the old flap method had been, and within a very few years after the method became known, the operation without an iridectomy was done only by one or two very conservative surgeons, always to be found, who believe that old ways are best. But, in spite of all this, the world of ophthalmology still continued to move—almost imperceptibly, it is true, but yet sufficiently for a careful observer to note, that after a certain number of years the "Gräfe" operation was not exactly the same to all men, and, in fact, in course of time the typical "Gräfe" was done by but a limited number of his disciples. First of all, the section was shifted a little more forward, and ceased to be strictly peripheral. This was done because some cases of sympathetic ophthalmitis were reported, which seemed to depend upon the injury to the ciliary region in the operated eye. And then again, prolapse of vitreous was much easier with a wound almost wholly scleral. The incision being then brought wholly, or almost so, in the cornea, ceased to be "linear," and thus the name the author had given to it could no longer be considered as accurately descriptive. But still the iridectomy remained, and for many years that and the narrow knife were all that could be truth-

fully said to remain of the "Gräfe" method of extraction.

It is not to be supposed, however, that the whole ophthalmological world bowed the knee to v. Gräfe and accepted the operation as it left his hands. One of his own pupils—Liebreich—devised a downward section situated wholly in the cornea, and extracted without an iridectomy; and the "Brussels" operation was very similar, the incision being made upward and curvilinear in form. The late Mr. Critchett, of London, was in the habit of doing the "Brussels" quite frequently when I was at Moorfields, twelve years ago. There are some others who made tentative efforts in the same general direction, but it was de Wecker, of Paris, who with his characteristic energy and enthusiasm, first tried the new method on an extensive scale. I think there is a disposition in certain quarters to give to others the credit which is really due to de Wecker as the pioneer in the operation which is now coming rapidly to the fore. I remember when I was following his clinic in 1875 and '76 he was doing essentially the same operation as is now being done, and was striving earnestly to impress its value on the profession. Speaking to me one day about it, he said, "They take to my iridectomy, but"—with a sad shake of the head—"they will not accept my method of cataract extraction."

It must be a source of considerable satisfaction to him to know that the profession has, at last, accepted it, at least for trial, and that many of our best operators now say they will never make an iridectomy again, except in particular cases. He himself does not do it in all cases, but for the common, uncomplicated senile cataract his "extraction simple" is the operation which in the near future will undoubtedly be the rule, and will remain so until something better is devised. Of course, the ideal extraction is with the lens in its capsule and without an iridectomy, and we shall not despair of its final realization, but, for the present, we must content ourselves with progress in that direction.

It is an interesting and instructive inquiry as to the causes that have led to a final adoption of this "simple extraction." As I stated before, one of the principal reasons which led v. Gräfe to make the iridectomy was the danger of prolapse of the iris, and with the extreme peripheral section he employed, this was unavoidable. But when the section was moved farther forward, it was found that the iris could, by a little coaxing, be made to return, after the lens had been pressed through the pupil, and frequently with no tendency to prolapse. The introduction of eserine, the active principle of the calabar bean, also assisted, in so far as the contraction of the pupil which it causes, renders a prolapse more difficult—at least it is supposed so by many, and the first operations without an iridectomy were all accompanied by instillations of a solution of eserine. It was also found that the incision at the corneal margin was not more likely to be followed by suppurative than when it was scleral, while the dangers of cyclitis and of sympathetic ophthalmia were materially lessened. It is true, prolapse of the iris would take place sometimes in spite of the best precautions and the greatest care, and posterior synechia were by no means infrequent, but yet the majority of the patients recovered with round pupils, and in many instances with movable ones. Still, as we have said, the innovation made no great headway; the conservatives were satisfied

with things as they were, and a large coloboma of the iris was not to them a matter of much consequence, so long as their patients saw well.

I, am, gentlemen, not an advocate or defender of rashness or unwarrantable boldness, but I think the self-styled conservative is, usually, the man who waits for somebody else to tell him what to do and the best way of doing it. These conservatives are afraid of iritis and synechia, forgetful that in only a very limited number of cases did the iridectomy prevent the occurrence of iritis in some degree, and ignoring the fact that in nearly every case the stump of the excised iris was entangled in the corneal wound even when the pupillary edge remained free, which it did not always do, by any means.

There was no great overpowering name, like that of v. Gräfe, to bolster it up, and the fact that the operation without iridectomy was revived in France would not materially hasten its adoption in Germany,¹ and in these days the stamp of German authority is quite necessary for matters ophthalmological. But de Wecker's persistence finally had an effect, and gradually the "extraction simple" began to be tried in selected cases by first one and then another, until now it is the question when one oculist meets another, "Are you doing extraction without an iridectomy, and how do you like it?" And the reply almost universally is, "Yes, I have done it in a few cases and I rather like it, and shall try it in more." When in New York this winter I found all the prominent men doing it, and, on the whole, they were very well satisfied with the results, and I have no doubt we shall hear from them, in print, to that effect soon.

The question also came up for discussion at the late International Congress, held in Washington last September, and there was a free interchange of opinion as to its merits. Of the Frenchmen present, all but Landolt did the operation as a rule. Mooren, of course, advocated his own plan of a preliminary iridectomy, while Mr. Henry Power, of London, said that he thought he should never, except in extraordinary cases, do an iridectomy again.

My own judgment in the matter is that in the good cases the results are better, and in the bad cases they are no worse than when an iridectomy is performed. Prolapse of the iris is, in my opinion, not any worse than the incarceration of the stump of the excised iris in the wound. Iritis is not any more frequent, according to my experience, than when an iridectomy is made.

As to visual acuteness, we have not had a sufficient number of cases to compare results, but, on general principles, it must be conceded that a round central movable pupil is optically better than a large coloboma. Neither should the question of appearance be ignored. Our patients have the right to expect of us the best results with the least possible amount of disfigurement; and one of the reasons de Wecker is said to have given for cultivating this method is that his clientele was so keenly sensitive to the aesthetic features of the question that he felt that he must get rid of the regulation mutilation of the iris.

But, after all, I think it may be said that one of the most

¹ It is only just to say that this statement is not applicable to all Germans. Prof. Schweigger, of Berlin—v. Gräfe's successor—does the operation, and is a strong advocate of it in proper cases, and his influence will undoubtedly be great in establishing it in Germany.

powerful promoters of the operation was the introduction of cocaine as a local anæsthetic. It is well known that the application of the cocaine solution to the outside of the eyeball acts but feebly on the iris, even when the solution is a strong one and is applied for some length of time; and even when the solution is applied directly to the iris there is not always a sufficient anæsthesia to make its section absolutely painless, though some contend that they have uniformly succeeded. Without an iridectomy the operation under cocaine is perfectly painless, and we can so assure our timid patients, and this assurance as to its being nearly painless allows them to submit more readily to an operation, renders them quieter under its performance, and, undoubtedly, by this quietude of mind conduces to a better final result.

It is not claimed that it is a method that is adapted to all cases. There are certain cases in which an iridectomy is to be preferred as being safer. I do not consider, however, that a large nucleus is a contraindication. I have extracted a brown cataract which was nearly all nucleus through an intact pupil with excellent results, and one Morgagnian cataract in which the small nucleus was floating in a liquefied corticalis, turned out most beautifully. So far I have found but three classes of cases in which I have considered it unsafe to dispense with an iridectomy, and these are the instances where there is a great deal of soft corticalis, or the cataract is immature and where the pupil is rigid, or where there is a tendency to glaucoma. There are some operators, however, I believe who do not make an exception even in such cases as these.

As to the *technique* of the operation, it is essentially the same for all operators who are at present doing it, though there are special features of detail peculiar to some. As a rule, the narrow Græfe knife is used, though some prefer a modification of the old triangular Beer's knife. Most of you have seen me do the operation a number of times in this hospital, but it may be well to go over again connectedly the various steps of the method as at present followed by us.

As you see, all our operations are done in the open wards of the general hospital. We have no dark rooms or dungeons, but plenty of light and air, and whatever cheerfulness may come from the presence of others in the same room and moving about, which, in my opinion, is not inconsiderable. The patient is given a bath and put in the bed in which he is to remain. All our operations are done under aseptic conditions. The brow, eyelids, and face are carefully washed with a weak solution of carbolic acid, particular attention being given to the cleansing of the edges of the lids and the roots of the eyelashes, for this is a favorite hiding-place for noxious germs. The eye is then anæsthetized with a four per cent. cocaine solution, and the globe flooded with a solution of corrosive sublimate 1 to 5000. Great care is given to the thorough cleansing of the upper and lower conjunctival *cul-de-sacs*, by injecting the solution a number of times under the lids by means of a pipette. My own hands and those of the assistants are washed thoroughly in soap and water, and afterward dipped in an antiseptic solution of the sublimate or carbolic acid.

It is rare now that I use a blepharostat or speculum for holding the lids apart in doing this operation, though when I make a combined iridectomy I do.

The assistant holds up the upper lid by carefully ap-

plying his fingers to the edge of the lid and drawing it back on the ball, while with the fixation-forceps I draw the globe down and hold it firmly. I then take a Græfe knife and make a section, detaching the cornea for about its upper third from the sclera. The puncture and counter-puncture are made just at the limbus—that is, at junction of the cornea with the sclera, and the attempt is always made to keep the section strictly in the limbus throughout its whole extent. This, however, is not always possible, for often there is a tendency of the iris to fall in front of the knife and in order to avoid cutting it the edge must be directed forward and as a result the apex of the section will lie to a greater or less extent in the clear cornea. I have not found, however, that this makes any material difference in the course of healing. The best results are, however, obtained when the section lies altogether in the limbus, and a small conjunctival flap is undoubtedly an advantage in conducting to a more speedy and firmer healing of the wound.

The section being completed, the anterior capsule of the lens is lacerated by a cystitome. This laceration of the capsule is done by some operators with the point of the knife in its passage through the anterior chamber from the puncture to the counter-puncture. I have tried it, but am better satisfied with the cystitome. In this operation almost everything depends upon the accuracy of the section, and it is important that the puncture and counter-puncture lie in the same plane perpendicular to the corneal axis, and to those who have never tried it, it is difficult to imagine how hard it is to estimate justly the exact position of the point of a knife when seen through the highly refracting cornea. It is much safer and easier to start the knife in a certain plane at the puncture and keep it up to the counter-puncture. When the anterior capsule is well lacerated a hard rubber spoon, which has been lying in an antiseptic solution of sublimate, is applied to the lower scleral margin and pressure is made backward and slightly upward causing the lens to rotate on its horizontal axis. Its upper edge, covered with the iris, then presents itself at the gaping wound, and a continuance of the pressure causes it to slip through the distended pupil and escape. This manœuvre is sometimes executed by making the pressure with the lower lid against the globe by means of the finger.

When the lens has been delivered, the lids are closed for a few moments to allow of an accumulation of some aqueous and to permit of a return of the prolapsed iris, which latter can be assisted by some slight rotary rubbing over the closed lid. When the lids are again opened it is frequently found that the iris has completely returned and the pupil is round and central. If it is black and there is no considerable amount of soft cortical matter remaining in the anterior chamber, the edges of the wound are closely inspected to see if they are clean and in apposition, and if they are found so, the eye is flooded again with the sublimate solution, the lids closed, a bit of thin cloth saturated with an antiseptic solution laid over them, the orbital cavity filled out with absorbent cotton and a light, four-tailed bandage applied over both eyes.

We have not adopted the new fashion, or rather the revived fashion of simply closing the lids with isinglass plaster. We think the light bandage more comfortable and safer. The bandage is removed at the end of twenty-four hours and the outer surface of the lids inspected, but the eye is not opened. This dressing is done simply for

the comfort of the patient. No possible good can come from an inspection of the eye itself. The wound is easily ruptured, even by the movements of the eye itself, when there will be a gush of aqueous and a prolapse of iris. If there is no great swelling of the lids it is only at the end of the third day that I gently pull down the lower lid and examine the condition of the conjunctiva, and usually put in a drop of atropine solution. If there is evidence of iritis or other serious inflammation sooner, as shown by great swelling of the lids and pain, the eye is opened at once and the difficulty treated vigorously by atropine, heat, anodynes, etc., and in case of suppuration of the wound by strong antiseptics.

There are a number of cases, however, in which the operation is not so ideal and simple as that just described. The iris does not return on accumulation of the aqueous, and when the lids are opened it is found lying in the wound. An attempt is then made to replace it. This is done by drawing a Bowman's probe, thoroughly aseptic, through the wound, the iris before it. And still the pupil may not become round, but remain oval. A rubbing on the outer surface of the closed lid will sometimes bring about the desired result. If not, then the effect of eserine should be tried. I find that many operators are afraid of eserine, thinking that it is liable to lead to iritis, and my own impression is that their fears are well founded and I never use eserine for assisting in a return of the iris when it can be avoided. If, in spite of all efforts, the iris refuses to remain, or, if it has been cut during the corneal section, the only thing to do is to excise it. And one of the claims of superiority of this operation is that the iridectomy can be done after the expulsion of the lens, if found necessary, as easily as before. As to washing soft corticalis out of the anterior chamber, I think it can be done often with impunity, but I believe too much meddling is not to be encouraged. It is done, however, by many good operators and it is perfectly true that under aseptic conditions we can do a great many things without fear which before we would not have dared to do.

We have done in this hospital, up to this time, twenty-four of these extractions without an iridectomy, and the general result has been so satisfactory that we deem ourselves committed to the operation until something better is offered. Only one eye has been lost, and that loss could not be, in justice, attributed to the operation. It was one of those cases which humble the pride of an operator and make him despair of obtaining absolute perfection in cataract extraction. The operation was perfectly smooth and thoroughly *secundum artem* and under the strictest aseptic precautions, and yet the whole cornea was lost through purulent inflammation which set in on the second day after the operation. In one other case there was closure of the pupil through iritis, which, however, can be improved by operation. In all the other cases the results were good.

ORIGINAL ARTICLES.

GLYCERINE ENEMATA IN INTESTINAL OBSTRUCTION.

BY EDWARD R. MAYER, M.D.,
OF WILKESBARRE, PA.

HAVING noticed in THE MEDICAL NEWS of January 28, 1888, an abstract of Dr. Althaus's article upon

the treatment of habitual constipation by enemata of from half a drachm to a drachm of glycerine, I have adopted this simple plan in a number of cases, with general, if not with uniform success. It is a matter for surprise that no one had stumbled upon this expedient before.

In some instances I have substituted for the injection, the use of suppositories containing small quantities of glycerine, employing either conical gelloid capsules or the hollow suppositories of cocoa butter; occasionally, in adults, applying in succession two of the latter, when the single vehicle was not of sufficient capacity to contain a drachm of the agent. When the gelatine capsules were used several times, a slight amount of rectal irritation ensued. This did not occur after the insertion of the hollow suppositories, and with but one exception, the treatment resulted painlessly and agreeably in a more or less copious alvine evacuation within a half hour.

In one case, in which painful internal hemorrhoids coexisted with obstinate constipation, the enemata, continued daily during four days, not only produced more satisfactory evacuations than had been caused by the compound liquorice powder, but seemed so to lessen the hemorrhoidal hypertrophy and distress, that the patient considered himself more relieved by this means than he had been by a week's use of an ointment of iodol, cocaine, and extract of ergot, applied through a pile syringe.

But it is mainly to a different and extended use of this method that I now desire to call attention, believing that by this there is opened up to us a new therapeutic resource, which may become of inestimable value in certain cases in which our armament has hitherto been defective, as it unquestionably was in that which I am about to narrate.

Miss M., æt. sixty, long and safely past the menopause, of very vigorous constitution and prudent life, never the subject of any gastric, hepatic, or intestinal derangements, after an unusual exposure to low temperature and cold winds, was attacked in the night of February 1, 1888, with very acute and intense abdominal pains which seemed to radiate from the umbilical region. These were attended by slight but continuous rigors. To relieve these pains, she took in rapid succession the remedies she had at hand, a teaspoonful of Squibb's cholera mixture and six granules of morphia and atropia, each containing one-eighth grain of morphia and one-hundredth of atropia. When called upon to see her early in the morning of February 2d, I found her still suffering extremely, with a tympanitic abdomen, a very anxious expression, her face, however, flushed by the atropia, considerable nausea, a wiry pulse of 120, and a temperature of 102.5°. A hypodermatic injection of thirteen minims of an equivalent of Magendie's solution, was followed by complete relief from pain and by temporary cessation of nausea. After this, throughout the illness, the patient had no return of the lancinating and agonizing pains which

characterized its inception, while suffering throughout, from extreme abdominal soreness and tenderness. Hot turpentine stupes were now applied, and ten grains of antipyrin administered hypodermatically, with the effect of reducing the temperature within an hour to 100°. Minute doses of calomel and subcarbonate of bismuth were placed upon the tongue every half hour, and a quarter of a grain of cocaine hydrochlorate in a drachm of cherry laurel water, directed to be given upon the recurrence of nausea.

During the succeeding two days this plan of treatment was continued. The antipyrin was given under the skin whenever the temperature rose above 100°, and eight minims of the morphia solution injected nightly, or whenever the painful symptoms increased.

Nausea and vomiting were frequently present, but were somewhat kept in check by the injections of antipyrin and by the cocaine. No liquids, however, were retained, even iced peptonized milk with lime-water being rejected, and the patient being compelled to be content with sucking cracked ice.

As soon as the primary inflammatory symptoms seemed to abate, upon the morning of February 3d, efforts were made to relieve the tympany and constipation. These consisted in the insertion of a large flexible catheter as far up as the sigmoid flexure and of the injection through it, first of several quarts of warm saponified water, and later, at each time, a pint of an emulsion of turpentine with yolk of eggs. No relief followed the use of these; no escape of flatus occurred, and the returned enemata contained only some intestinal mucus.

In the meantime, while the pyrexia was being controlled by the occasional hypodermatics of antipyrin, the abdominal inflation was steadily and alarmingly increasing. Oppression, dyspnoea, gastric regurgitation, and slight singultus had developed, the pulse was running up and becoming more thready and uncertain, and all the symptoms indicated the dangerous condition of the patient, and threatened impending catastrophe.

The intestinal distention throughout the illness had been uniform and globular. No hernia existed, and the most careful examination made by Dr. G. W. Guthrie, who kindly gave me his counsel in this case, and by myself, had failed to elicit any evidence of appendicular disease, perityphlitis, or of indigestion or knotting of the intestines; the case being considered by us to be one of peritonitis with paralysis of the muscular coats of the bowels.

Upon the failure of terebinthinate enemata and of large injections of plain or of medicated warm water to give any relief in this case, all medicines administered by the mouth being now rejected, it occurred to me, fresh from the use with another patient of a small enema of glycerine, as recommended by Dr. Althaus, to extend and amplify his method in the now very serious condition of this patient. Accordingly, I at once proceeded to inject through a large flexible rectal tube, inserted at least seven inches, two fluidounces of warmed glycerine, with forty minims of tincture of belladonna added to it. The insertion and the injection produced no distress or immediate effect, and I left the

invalid with directions to her nurse to cause the hips and knees to be elevated for a time. Upon my return after several hours, I found a greatly changed condition of affairs, comfort where there had been agony, and an anxious and pallid countenance replaced by beaming smiles and hopeful expression.

I was informed that within ten minutes after the administration of the glycerine enema, the patient felt a warm thrill and glow extending itself and permeating all through her intestines, followed by the vermicular movements which precede peristalsis, by audible and sensible displacements of gas, and finally by acute colicky pains. Within twenty minutes after the injection, there was an urgent call to stool, with the result of the escape of a large amount of flatus, and later, of a pint of semi-liquid evacuation of mingled yellow and green color, with some small scybala and a very pronounced odor. This evacuation was succeeded in an hour by another of a similar character. Considerable tympanites and tenderness still existed, but the abdominal distention was decidedly reduced, and the distress greatly relieved. The temperature, which had been kept depressed to about 100° by the antipyrin, soon fell to 99°, and the thready, jerking pulse of 120, had descended to 100, and the next day was not above 90, becoming rapidly soft and full. The nausea abated, and in a few hours disappeared and did not return.

Enemata of warmed glycerine to the extent of two ounces each, without the belladonna, which did not seem to have been a factor in the beneficial action of the injection, were now administered night and morning during the next three days, each one resulting in a copious fecal evacuation, at first liquid, and then formed. The temperature varied during several days between 99° and 99.6°, the pulse soon dropped to 80, the tenderness gradually disappeared, and the distention slowly melted away. Milk punch, beef-tea, and revalenta arabica were greedily taken in small quantities, retained and digested, and upon the ninth day of the illness the patient, while feeble, was entirely convalescent, a salutary diarrhoea having set in after the enemata were discontinued, and soon ceasing. The only drug treatment employed after the symptoms improved, was a single very small dose of a saline laxative and a nightly hypodermatic of six minims of morphia solution, to secure rest.

In regard to the action of glycerine in stimulating the intestinal canal after having been brought into contact with the lower rectal mucous membrane, Anacker's explanation of the effect is that the affinity of glycerine for water, withdraws the latter from the tissues, thus causing hyperaemia and irritation of the sensitive nerves of the rectum, which in turn lead reflexly to powerful peristaltic contractions. There is doubtless a portion of truth in this view, but in such a case as I have described, there is probably a further action of the remedy for which this alone will not account.

A peculiarity of the conduct of glycerine is that its physical action, when placed in contact with mucous surfaces, is such as to enable it to overcome

and annul the physiological action of the component mucous and submucous tissues, permitting us by its use to modify these in a singular manner. I suppose that every medical man has noticed that the nasal insufflation of glycerine, or its application to the uvula, tonsils, or pharynx, is immediately followed by laryngeal distress, cough, and profuse laryngeal and pharyngeal expectoration.¹ The fact must be that partly owing to its hygroscopic affinity, so great is the extensibility and permeative power in all directions along a mucous surface, of pure glycerine, that it not only diffuses itself along and beyond the original seat of its application, but that it inhibits the natural movements of the ciliary bodies, where these exist, as in the nasal and throat cavities, projects itself in a direction the opposite of their progressive current, paralyzing their activity, and so continues to do; until exosmosis has sufficiently diluted it to prevent its further influence.

In the case which I have described, I can scarcely believe that the direct stimulation of the lower rectum by the glycerine enemata could have been so perfectly conducted to the plexus myentericus as to cause such violent dysperistalsis in the ileum and jejunum as speedily occurred in them, and I consider it probable that portions of the injected glycerine rapidly passed the sigmoid flexure and became diffused throughout the colon and possibly through some folds of the small intestine. The result of such contact would be, not immediate and direct hyperæmia of the surfaces exposed to it, but, first, anæmia of the same with irritation caused by the exosmotic withdrawal of the watery contents of the capillaries and submucous tissues, along with a rapid increase of the liquid contents of the parched intestines, and then as succeeding the shock, subsequent hyperæmia, increasing afflux of blood and vital action, with a more extended basis for reflex stimulation of the great splanchnic centres, resulting in powerful peristaltic contractions upon tubes rendered, by the presence of the then diluted glycerine, more full of liquid contents, and offering sufficient resistance to the contracting muscular coats to work upon. *Per contra*, however, it is but just that I should state what I omitted to mention, that after the established success of the first injection passed through a rectal tube, the subsequent ones were administered through a two ounce hard rubber syringe, and seemed then, the first difficulty overcome and entrance effected, to be as efficient as that

which was injected higher up the rectum. But these latter injections were not followed by the intestinal thrill and glow which characterized the action of the first one used.

In using these injections, it must be borne in mind that the glycerine should be heated to at least 100°, as the remedy, when cold, cannot be readily drawn into a syringe.

If glycerine, injected by the method described, does really penetrate and permeate the upper colon or even the small intestine, it remains to be ascertained whether drugs combined with it as their vehicle, would measurably remain in the site to which they would be conveyed, or would be too completely washed away and extruded by the pouring out of large quantities of liquid and by the violent expulsive efforts of the muscular coat of the intestines to exert their specified influence. Should it be that any considerable portions of such drugs would remain *in situ*, it is manifest that an improved method of internal medication is near at hand, and that such drugs as antifebrin, antipyrin, aloin, belladonna, calomel, croton oil, colocynth, ergotin, hydrastia, hamamelin, naphthalin, physostigma, the terebinthates, and even nitrate of silver, and some of the germicides may be introduced by an entrance into portals hitherto closed to them excepting by a devious journey through the ordinary avenues. He would be a rash man who, with our present knowledge, should attempt to sterilize typhoid bacteria by a direct attack upon the agminate glands, but stranger things than this have happened, particularly of late, in the direction of gaseous rectal medication.

THE DIETETIC TREATMENT OF THE GOUTY DIATHESIS.¹

BY WILLIAM H. DRAPER, M.D.,

PROFESSOR OF CLINICAL MEDICINE IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BEFORE entering upon the special consideration of its dietetic treatment, it is important that we should define the gouty diathesis. We shall arrive at a clearer comprehension of its meaning, if we define the terms "gouty" and "diathesis" separately, and diathesis first.

The term diathesis, like temperament, hides more than it reveals, but it is, nevertheless, a useful exponent of the common recognition of a supposed underlying likeness of physical constitution in persons who are inclined to special and recurring aberrations from the state of health. The many and varied influences exerted by environment, food, habits, and diseases, have so modified the primitive physical condition of man as to impress upon it certain broad and well-defined derangements of

¹ I have often taken advantage, successfully, of these properties of glycerine, by emptying, by pressure, upon the rima glottidis, a soft probang sponge saturated with the liquid, in cases of true croup. This treatment has frequently proved to be an efficient means of aiding in the softening and dislodgement of the false membranes, and it always provokes a very violent and explosive cough. In such cases, glycerine in the form of spray can only be employed when diluted, and so rendered incapable of attracting more liquid from the parts to which it is applied.

¹ Read before the Medical Society of the State of New York, Feb. 7, 1888.

normal function and structure. The tendency to exhibit these derangements is sufficiently though somewhat vaguely indicated by the term diathesis, or disposition, its literal meaning. We qualify the term according to the prevailing idea of the determining cause of the particular varieties of health disorder. Thus we speak of diatheses caused by climatic influences, by diet, by special vices or specific diseases. We observe in the victims of these diatheses certain derangements of functions and certain weaknesses or vulnerability of tissues, which may descend in families and perpetuate their likeness through generations. We may say that scarcely any one is free from these diathetic states in one form or another. There are few persons, for example, whose physical constitution has not been modified by atmospheric or telluric influences, and fewer still, probably, who have not had a more or less permanent effect produced upon their organization by ancestral or personal habits of eating and drinking. Climate and diet, indeed, may be said to be the two causes of diathetic derangements of physical health which are the most universal in their operation. Of these the one with which we are concerned is that which proceeds from the habits of eating and drinking.

By a sort of common consent the term "gouty" has been given to the principal diet diathesis. In defining this term we must ignore any allusion to the theories of gout, and simply indicate, briefly, the broad and characteristic features of the gouty diathesis as observed in the functional derangements and structural changes to which its victims are subject. Of the functional disturbances, taking them in the order of their frequency we must mention first the fermentative indigestion provoked by the carbohydrates—the sugars and starches, and their derivatives, wine and beer. This indigestion is marked by gastric acidity, flatulence, and pyrosis. Next in order of the functional derangements, and not always, nor necessarily, in connection with gastric symptoms, are those of the hepatic function, constituting what is commonly called biliousness or the lithæmic state. This manifests itself by constipation, diarrhoea, and hemorrhoidal congestion, and especially by changes in the quantity and quality of the urine; in excess of acidity, in the presence of glucose and of crystalline deposits of uric acid, urates, and oxalates. Frequently associated with these conditions are diverse nervous disturbances, some central, some of reflex origin. Visceral neuroses, trigeminal, occipital, intercostal, lumbo-abdominal and sciatic neuralgias, vertigo, numbness, itching, burning, and other perversions of sensation are often symptomatic of the gouty diathesis; to these may be added the psychical disorders, hysteria and hypochondriasis.

It would be impossible, in the limits of this paper,

g*

to do more than indicate in the briefest manner the tissue derangements which occur in this diathesis. They may be conveniently classified as affecting the tegumentary structures, the skin and mucous membranes, and, through the connective tissue and the fibrous structures, the arteries, the viscera, the locomotor apparatus, and the nervous system. The liability of gouty persons to transient vasomotor derangements, and to more or less persistent inflammatory processes in the skin and mucous membranes, is too well recognized to require comment. The cutaneous erythemas, eczemas, seborrhœas, the catarrhs, pulmonary, gastro-intestinal and genito-urinary, which are associated with this diathesis are much more common than is generally believed.

The fibrous tissue lesions are observed in thickened arteries, in valvular diseases of the heart, in cirrhosis of the lungs, liver, and kidneys, in acute and chronic inflammations in and around the joints, and in perineuritis. In making this statement in regard to joint affections, I am aware that it assumes more than is admitted by many authorities on the pathology of the joints. If the presence of tophous deposits is regarded as essential to gouty inflammation, this anatomical evidence of the gouty nature of rheumatoid arthritis and *nodi digitorum* is certainly often wanting; but, if we regard the excess of uric acid in the blood not as the essential cause of gouty inflammation, but rather as one of the epiphenomena of the gouty state, and as the consequence of defective excretion; and, furthermore, if we take into consideration the revelations of the personal and family history in gouty diseases, we will frequently find abundant proof of the kindred nature of lithæmic gout and the more common forms of rheumatoid arthritis. It is certainly often impossible to differentiate them clinically, and, so far as a similar origin can be inferred from their reactions to treatment, there is no lack of evidence of their relationship in this respect.

The common and varied nervous derangements of gouty persons have already been referred to, in connection with the numerous functional neuralgias and paræsthesias associated with gouty indigestion. In addition to these there are certain definite persistent neuralgias and perversions of sensations which are probably dependent upon perineuritis. The most common of these are the sciatic, cervico-brachial, intercostal, and lumbo-abdominal neuralgias; numbness, formication, itching, vertigo, and the like.

There is one other organic derangement which my experience leads me to believe is a common one in gouty families, and that is anæmia. The tendency to blood deterioration is especially noticeable in women who inherit this constitutional vice. We have presented this brief and imperfect sketch of the gouty diathesis because it seemed an essential preliminary step to the consideration of its dietetic

management; for it is clear that if this diathesis has its origin in habits of eating and drinking, the rational basis of treatment must involve a serious modification of these habits by the regulation of the diet.

Gout may fairly be regarded as a disease of modern civilization, and as presenting its most typical and varied manifestation in the more advanced communities of the civilized world. It has been said that had mankind continued to be vegetable feeders, and never known the use of wine or beer, we should have had no experience of gout. This is probably a very partial and imperfect statement of the origin of this widespread disease, inasmuch as typical gouty arthritis has been observed in the herbivorous animals. There are doubtless many factors in the production of this diathesis, relating to quantity as well as quality of food, to the relations of food to work and habits of life, indeed, to all the circumstances which affect the complex metabolism of food and the evolution of vital energy in the process of nutrition.

It is a common belief that gout is largely the result of excessive indulgence in animal foods, and yet, as has been already remarked, there is no more conspicuous characteristic of gouty persons than their feeble capacity for the digestion of the carbohydrates and their derivatives. It is a fact of daily observation that the disorders of digestion, with all the attendant derangements which belong to the gouty diathesis, are especially determined and aggravated by the too liberal use of sweets, starches, wine and beer. It is the recognition of this feeble capacity for the conversion of the carbohydrates, which, I believe, suggests the guiding principle in the regulation of the diet of gouty persons. It is important to note that this is in diametric opposition to that regulation of the diet which is based upon the theory that uric acid is the essential cause of gout. This theory makes the exclusion of nitrogenous foods the special feature of an anti-gouty diet. But while a diet largely composed of carbonaceous foods is opposed to the generally accepted theory of gout production, I believe that clinical experience amply demonstrates that it is the most efficient cause of the lithæmic state and the protean miseries of the gouty diathesis.

More than fifteen years ago while studying the relations of the benign form of glycosuria to gout, I was impressed with the frequent association of the saccharine disease with the characteristic symptoms of the acid dyspepsia of gouty subjects, and not only this but with the actual correlation of gout and diabetes in different members of gouty families and frequently with the association of the two diseases in the same individual. I was led to this observation largely by the impressive lectures of Bence Jones on the "Applications of Chemistry to Pathology and

Therapeutics." A large clinical experience has confirmed me in the belief that the theory of suboxidation explains better than any other the etiology of glycosuria and gout, and that in both these diseases the consequences of defective oxidation are first and most markedly observed in the digestion of the carbohydrates.

I have thus referred to glycosuria as belonging to the family of gouty diseases because the diet which is prescribed for this malady represents the extreme degree to which it may be necessary to carry the exclusion of non-albuminous foods in some forms of gouty disease. If we consider the ordinary anti-diabetic diet we find that the order in which the non-nitrogenous elements are excluded in glycosuria is first the sugars, including fruits, wine, and cider, and secondly, starches, including beer. The same order has often to be observed in the regulation of the diet of gouty persons. The intolerance of sweet desserts, of fruits, raw or cooked, and especially of wine, is one of the most frequent indications of this diathesis and in decidedly gouty persons indulgence in these articles of diet is pretty certainly followed by the characteristic dyspeptic symptoms, or by some of the nervous disturbances which I have mentioned. It is not uncommon for gouty persons to present special idiosyncrasies in regard to certain articles of diet of this class. This is notably true of particular varieties of wine and fruits, muscular and articular pains and even articular inflammation being promptly provoked by them.

The intolerance of considerable quantities of farinaceous foods and beers, while perhaps less marked than that of sweets and wine, is still often a pronounced characteristic of gouty subjects. They give rise to indigestions, which are especially apt to be accompanied by mucous catarrhs and cutaneous eruptions. The evil effects of excessive quantities of farinaceous foods are often observed in the children of gouty parents, in whom they engender an abnormal accumulation of fat, catarrhal affections, eczemas, and not infrequently lithæmic neuroses.

While the restriction of starchy foods seldom requires to be so absolute as that of sweets in the diet of gouty disease there is no question as to the value of their complete exclusion in certain cases. The strict enforcement of a purely nitrogenous diet in some cases of rheumatoid arthritis, and especially in aggravated forms of gastric catarrh, is unquestionably a therapeutic measure of conspicuous value. The utility of a diet of meat in these cases has met with a certain degree of popular recognition through the success of the so-called "Salisbury treatment," and this very fact has perhaps retarded a more general acceptance of its value by the profession. My own experience has furnished many examples of chronic arthritis, gastric catarrh, and lithæmia which have proved rebellious to all treatment while farina-

ceous foods were allowed to form an element of the diet. The cases, I think, are few where it is necessary to exclude them entirely, but I am sure they are very numerous where the greatest benefit is derived from reducing them to a moderate amount of bread, and allowing a variety of animal food and green vegetables. The hydrocarbons, butter, cream, cheese, nuts, marrow, and the fat of meats may be allowed in moderation, and serve to replace the carbohydrates in an ordinary mixed diet.

As the most pronounced peculiarity of the victims of the gouty diathesis is the prompt reaction which they present to wine and beer, it follows that the exclusion of these beverages, as articles of diet, must be insisted upon. This is often a difficult injunction to enforce. There is so strong a popular and professional prejudice in favor of fermented liquors as articles of diet that one can hardly prohibit the use of them, under any circumstances, without being regarded as a crank. In spite, however, of the generally received opinion that ardent spirits are responsible for all the physical evils of intemperance, I have long been inclined to believe that the fermented preparations of alcohol are equally, if not more productive of functional derangements, and even of structural lesions. Certainly, if alcohol is allowed at all, very dilute spirits or dry champagnes are the only forms, as a rule, which victims of gout can use with impunity.

I would also repeat the caution which I have suggested in regard to fruits. I believe it is often very important to insist upon the exclusion of fruits from the diet of gouty persons. This is another injunction which is so opposed to popular and even professional sentiment that it is frequently difficult to enforce it.

I have thus sketched very briefly, the principles which I believe should guide us in regulating the diet of persons presenting the general features of the gouty diathesis. There are many details in this regulation based upon the more or less pronounced intensity of the diathesis, upon its particular manifestations, and upon the special idiosyncrasies which gouty persons exhibit in regard to certain articles of diet which are very important and which necessarily make each individual case a study by itself. These details I have not time to consider. It will be observed that the general principles which I have stated are based upon the recognition of the fact that gouty subjects have a limited capacity for the digestion, and conversion into the different forms of vital energy, of the carbohydrates. There seems to be no better way of expressing this cardinal peculiarity. How this departure from what has generally been regarded as the primitive habits of man as a vegetable feeder, has been brought about, it is not our purpose now to inquire. I would simply remark in regard to this point, that it

is probable that the exigencies of modern civilized life have come to demand a finer adaptation of diet to occupations and mode of life than has hitherto been considered necessary or practicable. The relations of food to work, or to the diverse developments of human energy, and the regulation of diet according to special physical defects, constitute some of the most interesting and important problems that can engage our attention. Science has long since arrived at some definite conclusions on these questions in their application to the training of athletes, the animals which serve and amuse us, but beyond this it has not shed much light. It may be said, however, that it is probable that the carbohydrates are the foods best adapted to the evolution of the greatest and most prolonged muscular energy, and that they are most perfectly consumed and in the largest amount by those whose lives are spent in mechanical work and under favorable conditions in the open air. There is also good reason to believe that brain workers, and those whose lives are passed indoors, and in more or less physical indolence, require, for the best development of their energies, a diet that is rich in albuminous foods.

OMPHALECTOMY FOR STRANGULATED UMBILICAL HERNIA; DEATH.

BY W. W. KEEN, M.D.,

PROFESSOR OF SURGERY IN THE WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA, SURGEON TO ST. MARY'S HOSPITAL, ETC.

MRS. G., æt. fifty-six, a short, very fat woman, abdominal girth fifty-four inches, had had five children. After the birth of her last child, eighteen years ago, an umbilical hernia showed itself, of the size of a small pear. She has worn no truss. She has had repeated attacks of intestinal colic transient in character; but no other inconvenience, nor had the tumor enlarged. Within a year she has had several bad falls, but no special symptom referable to the tumor. The last occurred a week before the present sickness. At 5 A. M., January 21, 1888, without apparent cause the tumor became painful and inflamed. She sent for Dr. Emma E. Musson, who treated her symptomatically as seemed to be called for. Her bowels were freely opened that morning. She vomited, repeatedly, simple bilious matter.

I first saw her January 23d, at Dr. Musson's request. I found the tumor inflamed and softened over about one-third of its area, the rest being hard and doughy. It was not fluctuating and was entirely dull on the most careful percussion. It was very tender and admitted of but little attempt at taxis, which was unsuccessful. Simple antiseptic dressing was therefore applied lest it should open spontaneously. Morphia and atropia relieved both the pain and the vomiting. The diagnosis was an irreducible old omental hernia with, probably, a recent enterocele in addition.

January 24. Her symptoms have somewhat ame-

liorated. The temperature has not risen above 99.2°. The vomita have become brown and thicker, but absolutely without fecal odor. The tumor has kept at the same grade of inflammation, but has softened over all its surface without bursting. Its tenderness has decidedly lessened, so that it can be easily handled, but the hernia cannot be reduced. The hypodermatic needle showed the liquid contents to be bloody serum and not pus, and with no fecal odor. Around the navel, over two fingers' breadth, is a ring of hardening, but no tenderness or other evidence of peritonitis. Her vomiting has been less frequent, only two or three times a day.

26th. The same conditions obtain; no further rise of temperature; moderate purgatives had produced no evacuation. An exploratory operation was decided on for the next day, unless she was decidedly better. Dr. Musson examined the urine, finding it normal, no sugar or albumen.

27th. Last night distinct fecal vomiting set in, and this morning the matters vomited were really liquid feces and very offensive. At 9.45 A. M. I operated with ether and strict antisepsis. I incised the sac, when a few drops of odorless bloody serum escaped and a mass of healthy uninfamed omentum came in view. This was adherent at almost every point, but most of the adhesions could be broken up with moderate force. Deep down in its centre I found the ring of the umbilical opening. The belly wall was three inches thick, and the tip of my forefinger just reached the ring. Through this protruded a small coil of intestine which was surrounded and covered in by the omental fat. The intestine was a little congested, but not dark in color, nor soft in consistence. By loosening its moderate adhesions I was able to reduce it. The ring then was found to be as large as the forefinger, with a firm thickened rim. I tried then to reduce the omental protrusion, but its adhesions at the mouth of the sac were too firm.

The umbilical opening was so deep, and the ring so thick and unyielding, that it was hopeless to attempt its closure; and to leave it as it was, so thoroughly open and so inaccessible to external pressure through so thick an abdominal wall, was but to invite a speedy return of the hernia. Accordingly, I at once performed omphalectomy, a procedure I had previously decided upon in case I should operate, unless circumstances should forbid. I made a vertical elliptical incision six inches long, including the umbilicus at its centre, only one vessel requiring ligation. When the abdomen was opened, excepting the hernia, I saw nothing abnormal and I did not explore it. I tied and divided the omentum adherent to the umbilical opening and immediately proceeded to close the abdomen. I used four rows of sutures, one to the peritoneum, one to the muscular wall which was very thin, a third to the enormously thickened fatty layer, and the fourth to the skin. The first three were of chromic catgut, the fourth of wire. Sublimate gauze and a binder completed the dressing.

She passed the night in fair comfort, with a little morphia, but her temperature at 9.30 P. M. was 100.8°, at 4 A. M. 103.4°, and in the morning at

10.30 had risen to 104°. At 4 A. M. she vomited once, but it had only a faint fecal odor. At noon her temperature was 103.6°, and as Dr. Musson had already given her 20 grains of quinine by the rectum, I advised 15 grains antipyrin. She had no pain. She was somewhat stupid, and her general condition was far from satisfactory; gaping, sleepy, and with a quick and feeble pulse. She was also somewhat jaundiced.

At 2.15 P. M. she took the antipyrin. At 2.45 P. M. she was partially collapsed, the hands and feet cold, pulse quick and thready, and she was nearly unconscious, temperature 102.4°. This condition gradually deepened in spite of external heat, brandy, digitalis at short intervals by the hypodermatic syringe, etc., till 7 P. M., when she died.

Post-mortem nineteen hours after death by Dr. Musson.

Result of Post-mortem.—The wound showed no signs of uniting. The peritoneum, omentum, and transverse colon were an adherent mass, dark in color.

The *bowel* just above the cæcum, and the part found in the hernia were gangrenous in appearance.

The *stomach* contained a pint of fluid fecal matter, which formed a coating to the whole lining of the stomach. The stomach and bowels were distended with gas. Decomposition had been rapid.

The *gall-bladder* was filled with stones.

The *right kidney* contained a large cavity filled with urine and numerous small stones. Little or no kidney substance was left.

The *left kidney* was large, flabby, and friable.

Spleen, substance friable.

Liver, under surface grayish-green.

Signs of an old *perityphlitis* were found.

The *chest* was not opened.

REMARKS.—The operation above detailed I had intended to perform, some years ago, for the radical cure of a large non-strangulated umbilical hernia, but circumstances made it impossible.

So far as I know, this is the second case of umbilical hernia treated by Omphalectomy, and, indeed, until Dr. Wm. J. Taylor made a necessarily hasty search through the literature of the subject, I thought it the first. In the *Medical Record* for 1866, p. 73, Prof. H. R. Storer describes the case of a woman upon whom he performed a precisely similar operation, Feb. 4, 1866. She was forty-one years of age, and had suffered from ascites, of hepatic origin, for many years. For this she was tapped forty-five times, not only to relieve the ascites, but, at last, to prevent actual rupture of the umbilicus. For the same reason as myself he made a long incision (seven inches), so as to avoid the puckering and plaiting of the margins, if a simple, circular, or short oval incision had been made. At the end of twenty-four hours she was doing well, when from a sudden fright, which, in her enfeebled condition she could not resist, she "rapidly sank and died of secondary shock, thirty-eight hours after the operation." At

the autopsy no peritonitis was found. The gall-bladder was distended with calculi.

In these days of abdominal surgery it is rather curious to see the serious storm of criticism that the case aroused—so serious that Prof. Storer deemed it needful to enter into an elaborate defence of it—a defence which subsequent events have fully indorsed. Indeed this is one of the earliest cases of a purely exploratory laparotomy that I know of, and is most creditable to Prof. Storer's foresight. November 21, 1865, two months before the appearance of the umbilical distention, and two and a half months before the Omphalectomy, he made a distinctly exploratory operation to clear up the diagnosis; but as, with a caution due to the then prevailing sentiment in the profession, he only explored the pelvis, he did not discover the nature of the hepatic trouble. She was entirely well, without any bad symptom, in five days.

In the *Trans. Amer. Surg. Assoc.*, vol. 7, 1887, a case of Dr. Michael's will be found in which for a non-strangulated, median, ventral hernia he did a precisely similar operation with a favorable result.

Umbilical herniæ are generally operated upon only by ordinary herniotomy, followed in some cases by ligature of the sac or suture of the ring. I believe, in spite of the unfavorable result of these two cases, a result incidental and not fundamental, that Omphalectomy in cases of strangulated, and often of non-strangulated, umbilical herniæ will in time prove to be the proper procedure, especially in cases like my own, where the immense thickness of the belly wall makes any operation on the ring itself difficult if not impossible. The tendency of modern surgery is decidedly toward the radical cure of hernia, and the comparative safety of laparotomy, as now done, makes such a radical operation in umbilical hernia peculiarly wise.

My only regret in the present case is that I did not do the operation earlier, before the patient's strength was exhausted, and before the fecal vomiting set in. To this last I attribute her death. To fill the stomach of a healthy person with liquid feces would be perilous enough, but in the case of a patient already sick for six days it was more than she could bear, and her system was probably poisoned by it.

The condition of the kidneys was not suspected before death, although the urine was examined. Doubtless their unsatisfactory condition, as well as that of the liver and spleen, contributed somewhat to the ultimate result. The normal amount of water was secreted and drawn by the catheter after the operation.

The operation itself, in spite of the excessively thick abdominal wall and big, flabby belly, was very easy in its technique. Even in so large a belly no trouble was found in dealing with the intestine. Had the patient's condition been good, I have every

reason to believe it would have been entirely successful.

How far the antipyrin may have contributed to the fatal result is open to question. The sudden and great rise of temperature seems to me to mark the septicæmia which would naturally be followed by speedy collapse. It was too sudden and too great to result from the operation alone, and the want of union in the walls of a healthy wound, and the gangrenous process in an intestine which was in far from an unfavorable condition at the time of the operation, seem to point distinctly toward septicæmia from fecal absorption.

The antipyrin probably did precipitate the impending collapse and hasten the lethal result.

The absence of fecal odor in the fluid of the sac is worthy of note, and is accounted for by the separation of the fluid from the protruded intestine by the omentum. This produced a doubt as to whether any intestine was caught in the hernia until the fecal vomiting settled that fact. Before that the temperature and all the local signs pointed rather to an old inflamed omental hernia only. Had the liquid shown a fecal odor I would have operated earlier, and I believe with a happier issue.

LEPROSY AFFECTING THE EYES.

BY CHARLES W. KOLLOCK, M.D.,
OF CHARLESTON, SOUTH CAROLINA.

THE opportunity of seeing and treating leprosy does not fall to the lot of many physicians in this country, and books upon ophthalmology written here and abroad either mention it incidentally or not at all. No new light will be thrown upon its etiology or treatment, but a simple description of the effect of the disease upon the eyes, and the treatment pursued, is the purport of this paper.

Though but one case has come under my notice it is a well-known fact that the disease has existed in sporadic cases in this neighborhood for years. It has not spread, nor has it been inherited, so far as can be ascertained. In but one instance to my knowledge has more than one member of the same family been affected. In this case a lady and her niece were both diseased. The latter, as soon as the disease became known, at once put herself under treatment and the disease apparently was in abeyance. She died quite suddenly of heart trouble.

In May, 1886, Mrs. — was brought for consultation concerning her eyes. She had been sick about six years, and the disease was a pronounced case of *lepra tuberosa* and *anæsthetica*, the tuberosities and *anæsthetic spots* both being present. The leonine countenance was not at that time so well marked as it had been some months previous, but even then there was a heavy, wrinkled and distorted appearance. Under treatment consisting at times of Chaulmoogra oil and Hoang-nan she had im-

proved slightly, the tuberosities disappearing to a considerable degree, but leaving the anæsthetic spots.

She was very miserable, with poor appetite, suffered from insomnia, was exceedingly nervous, and with vision so defective that it was with difficulty she could find her way about the house. This difficulty was increased by the loss of the tactile sense of the fingers and hands, which were swollen, especially around the joints, and lacked sensation to such an extent that she was badly burned by a stove without being at first aware that it was heated.

Her eyes became affected about two years prior to her visit. Vision was as follows: R. E. $\frac{1}{CC}$;

L. E. $\frac{10}{CC}$. There were photophobia, lachrymation,

narrowing of the palpebral fissures, thickening of the lids, ocular and palpebral conjunctivitis, and keratitis. The corneæ were hazy and covered with facets, and near the centre of each was a whitish spot about three mm. in diameter. Small blood-vessels ran from the conjunctivæ to these spots, which were not like the true pannus, but lighter in color and more deeply set in the corneæ. The irides were dull, pupils not dilated, and reacting but slightly to a strong solution of atropine. Apparently there were no posterior synechiæ, for the pupils dilated regularly, and whether this inactive condition was due to non-absorption of the mydriatic by the corneæ, or to a stiffened and infiltrated state of the irides, is a matter of conjecture, but probably both contributed. Owing to the hazy condition of the corneæ no intraocular examination could be made.

Having never seen a case of lepra, I was inclined to be sanguine of improving the condition of the eyes. Attention was directed to the lids, cornea, and iris. For the lids all known collyria, not irritating to the cornea, were used, and solutions of nitrate of silver carefully applied. Atropine at first allayed the pain and moderately dilated the pupils (beyond a certain point they would not go), but after a time it set up violent inflammation, and was discontinued. Eserine was without avail, and the ointment of yellow oxide of mercury and calomel failed to accomplish any good. Jequirity (three per cent. solution) was used on several different occasions, intense inflammation followed as usual, promptly subsided when the applications were stopped, and the condition of cornea and lids remained unchanged.

Iridectomy was performed upon the worse eye (right), and though there was at this point comparatively clear cornea, no improvement in vision followed. The lens seemed fairly clear through the hazy cornea. Finally both spots were deeply cauterized by the galvano-cautery, and this alone seemed to better the conditions a very little by causing slight contraction of the spots and smoothing of the surfaces.

After this treatment was discontinued, as the patient and family were averse to more active measures which would have been more extensive, including cauterization and perhaps extraction of the lens, which has of late become distinctly cataractous.

The size of the spots has not materially increased, but vision has gradually grown worse, she being able to distinguish the movements of a hand before the eyes, but cannot count fingers. Secondi, of Genoa, reports several cases where vision was improved and the disease apparently checked by excising the spots from the cornea, and performing iridectomy.

It is unfortunate that no ophthalmoscopic examination was possible, for it is believed that the disease has extended to the retina and choroid, as no improvement in vision followed the iridectomy, at which time the cornea and lens were not opaque.

Though treatment has been unavailing, and the condition of the eyes, as far as vision is concerned, has gradually become worse, still, I am inclined to think that had a thorough and repeated application of the galvano-cautery been made in the beginning of the attack the result would have been different.

MEDICAL PROGRESS.

The Antiseptic Values of Chlorides, Nitrates, and Sulphates.

—In a recent number of the *Journal of the Society of Chemical Industry* (Vol. vi. No. 11), MR. C. T. KINGZETT, F.C.S., records the results of some experiments which he has conducted in order to determine the relative extent to which certain metallic chlorides, nitrates, and sulphates retard the appearance of mould on flour-paste, and putrefaction in extract of beef respectively. The general bearing of the results is to show that the salts of the alkalies and alkaline earth, excepting magnesium sulphate, appear in many instances to promote and never to retard the growth of mould. The compounds of zinc resemble those of the alkaline earths in their action. On the other hand, the salts of iron, tin, lead, and aluminium exercise distinct but not very powerful effects in preventing the appearance of mould. The chloride of lead is, however, more active, whilst the most efficient are the chlorides of mercury and copper. In preventing the putrefaction of extract of beef, the chlorides of mercury and copper were also the most effective; whilst chloride of zinc was more and chloride of lead less active than in retarding the growth of mould on flour-paste. The value of the investigation is very much reduced owing to the experiments not having been conducted on the modern lines of bacteriological research. Thus the various test-glasses containing the experimental media were allowed to become accidentally infected from the air to which they were exposed, instead of being all inoculated either with some definite microorganism or with some definite mixture of microbes, as is now invariably done in experiments of the kind.—*British Medical Journal*, January 21, 1888.

Poisoning from Boric Acid, in Surgical Practice.—DR. SPENCER, of St. Paul, reports the following case, in the *Northwestern Lancet* of January 15, 1888.

A short time since a woman was admitted to the City Hospital with syphilitic necrosis and caries of the bones forming the ankle-joint. October 2d, he removed by scooping, scraping, etc., parts of the lower ends of the tibia and fibula, and nearly all of the astragalus. The

sinuses in the soft parts about the joints were scraped as clean as possible, the cavity was washed out with a weak bichloride solution, and packed with large crystals of boric acid, probably something over half an ounce being used. Although the wound was very foul-smelling at the time of operation, it was left undressed for a week and was then found nearly free from odor. Most of the acid was still undissolved in the cavity, but a small portion having been absorbed. It was washed out and dressed in the same way as before and left for another week. During this time, fourteen days, her health, appetite, and general condition were good. She then began to lose her appetite, and in a short time had nausea and vomiting, which grew progressively worse, so that, finally, nothing could be retained by the stomach. Lime water, counter-irritation, and cold to the epigastrium, morphia, ipecac, and all the various anti-emetics were used in vain. Her other symptoms were restlessness, insomnia, the little sleep she did get being very disturbed, almost constant hiccough, great weakness and emaciation, and a very marked cardiac weakness. Although her pulse was very weak, there was none of the compensating rapidity which generally occurs in heart failure. She had a rather severe coryza, the conjunctivæ were very red and inflamed, there was marked inflammation of the fauces and pharynx, some bronchitis, and an acrid discharge from the anterior nares. Her tongue was red, glazed, and cracked. There was a very well-marked papular erythema, the papules nearly coalescing over the face, neck, arms, and upper part of chest. These symptoms came on gradually and grew worse for three days, at which time she was very weak, though she had taken considerable nourishment by rectum. The dressing was then changed, and the symptoms here noted began to disappear, although it was ten days before she was as well as before they began.

The Treatment of Acne.—UNNA, in the *Monatshefte für praktische Dermatologie*, No. 1, 1888, advises the use of the following formulæ, to be applied at night:

Ung. zinc. benzoat.	86 parts.
Sulphur. præcip.	10 "
Terræ siliceæ	4 "

Or

Ung. zinc. benzoat.	80 parts.
Resorcin. puriss.	10 "
Terræ siliceæ	10 "

For use during the day either of the following lotions may be employed:

Resorcin.	2 to 5 parts.
Glycerin.	1 part.
Aq. flor. aurant.	20 parts.
Spiritus	80 "

Or

Hydrarg. bichlor. corros.	$\frac{1}{10}$ to $\frac{1}{2}$ part.
Glycerin.	1 part.
Aq. flor. aurant.	20 parts.
Spiritus	80 "

Typhoid Bacilli and Boiling Water.—In order to test the destructive power of boiling water on typhoid bacilli, DR. VILCHUR, of St. Petersburg, made a number of pure

cultures in broth, keeping them in a thermostat for two days at a temperature of about 92° F., and then mixed them with known proportions of boiling water, immediately afterward sowing the mixtures in jelly. The results showed that, when the volume of boiling water equalled that of the culture, the bacilli were partially but not wholly destroyed. When double the volume of boiling water was used, the bacilli were all killed. From experiments with typhoid stools, he found that all the bacilli, however numerous, were invariably destroyed by the addition of a volume of boiling water equal to four times that of the stool. In this way he suggests it will be easy to disinfect with certainty all the dejections of typhoid patients.—*Lancet*, January 14, 1888.

Impaction of a Coin in the Larynx; Laryngotomy; Recovery.

ARCHAMBAUD reports the case of a man, aged twenty-three, who came to one of the Paris clinics suffering from prostration in a marked degree. Two days previously he had swallowed a 50 centime piece, which had lodged in the larynx. He had been suffering from dyspnoea, could take food with the greatest difficulty, and was on the verge of exhaustion.

Examination revealed the coin lying upon the lower vocal cords; it was enclosed from right to left by the ventricles of Morgagni; in front it disappeared under the anterior portion of the ventricular bands; behind one could see clearly the arc which it described; it was separated from the arytenoid region by a very small space.

The patient respired only by means of the cartilaginous portion of the larynx; had the accident happened to a child it must have proved fatal. Efforts at extraction by instruments introduced into the larynx having proved unsuccessful, an incision was made in the median line of the thyroid cartilage at the insertion of the vocal cords and the coin was removed. The patient recovered perfectly in twenty days.—*L'Abeille Médicale*, Jan. 9, 1888.

The Treatment of Otitis Media.—CAZZOLINO is quoted by the *Journal de Méd.* of January 15, 1888, as using the following fluid for injection in purulent otitis media:

Aquæ destill.	3 25.
Glycerin.	3 12½.
Iodid. pur.	grs. 5¼.
Potass. iodid.	grs. 30.
Acid. carbolic.	grs. 15.

Which may be diluted if its application be painful. Three injections of this fluid, when warmed, were given daily, with good results.

Fecal Tumor of the Rectum, obscuring Diagnosis.—The *Medical Press and Circular* of January 18, 1888, reports the case of a woman suffering from great pain in the abdomen and toward the back, resembling in many points a fibroid tumor of the uterus. She was constipated habitually for the previous four months, and, as a consequence, she suffered periodically from diarrhoea, but she always felt as if the rectum was not sufficiently emptied of its contents. Examination through the vagina revealed a hard globular tumor at the posterior part, but it was evident that the rectum was the seat of it. On passing the finger into the latter place a lump could be plainly felt firmly attached to the posterior wall, hard and immovable. At one point fluctuation seemed to be

present, but all attempts to dislodge it were fruitless. Cancer of the rectum could not be entertained as the most usual symptoms were absent. Suspecting a fecal collection enemas of glycerine were ordered for a week, and at the end of that period the tumor was easily broken down and removed.

Creolin, a New Antiseptic.—The Vienna correspondent of the *British Medical Journal* of January 21, 1888, writes that NEUDÖRFER has used this antiseptic in military surgery with good results. It is a sort of tar which is obtained from the English pit coals by dry distillation, and from which the poisonous hydrocarbons have been eliminated. The chemical constitution is not yet established, but owing to its characteristic qualities it can be very easily recognized by the practitioner. It is derived from the aromatic class of hydrocarbons, and it is closely related to creasote, carbolic acid, resorcin, hydrochinon, etc. The very first results which Dr. Neudörfer had obtained with this drug were very favorable, and he had for this reason at last abandoned all the other antiseptics and used only creolin. The first success he had obtained with it was in the case of a girl, aged seven, who suffered from *erysipelas bullosum migrans faciei*. The skin of the nose, the upper lip, and over both zygomatic arches was greatly stretched and much reddened; some pustules were also present. The lower eyelids were oedematous, the frequency of the pulse and the temperature were increased, and the patient also suffered from headache. Dr. Neudörfer said to the relatives that the erysipelas would spread over the forehead and ears, and that it would disappear in from seven to ten days. He ordered a two per cent. solution of hydrocarbonate of sodium with syrupus simplex, and directed the erysipelatous parts to be brushed thrice a day with undiluted creolin. The erysipelas did not advance; the pustules dried up; the infiltration of the skin disappeared, and the patient ceased to complain of pain. The symptoms of fever also disappeared, and the erysipelas was cured in two days and a half. Dr. Neudörfer has, since that time, tried creolin in two other cases of erysipelas with like success. In former times he used always to treat severe cases of erysipelas successfully with subcutaneous injections of carbolic acid, and he had, therefore, no reason to resort to the method of Krascke. Since he had tried creolin, however, he no longer used subcutaneous injections of carbolic acid, which had recently been again recommended by Fehleisen. The second case which had been antiseptically treated with creolin was that of a butcher, aged twenty-seven, who had cut the last phalanx of his left middle finger and the terminal front of his ring finger. After treatment with a two per cent. solution of creolin and the application of creolin gauze, the wound healed, in eight days, without suppuration or swelling. In the third case, in which a tumor in the region of the lower jaw was removed from a woman aged thirty, creolin was used during the operation and afterward as a dressing, two silk sutures closed the wound, and no drainage tube was put in. On the third day the sutures were removed; the wound was already closed, and the dressing could also be removed. The author has since used creolin in several minor operations, both in the polyclinic and in private practice, and has always observed that it relieved pain, checked the hemorrhage, and limited suppuration. At first he used a two per cent. solution, but he has now

found that creolin is efficient in a one-half per cent. solution. Dr. Neudörfer prepares a fresh solution each time by adding two drops of creolin to 6 ounces of water. He uses only ungreased gauze, which, being folded from ten to twelve times, is wrung out of the milky solution and applied to the wound, which is afterward covered with several layers of dry gauze. The dressing may be left until healing has taken place. This dressing is very convenient, both for the physician and the patient, and it is also very cheap. The surgeon's wards, the patient's skin, and the instruments, can be disinfected with a two per cent. solution of creolin. For country practice, as well as for use in war, creolin is, in his opinion, the most trustworthy and convenient, as well as the cheapest and most harmless antiseptic.

A Lozenge, for Use in Phthisis.—DURAND prescribes

Iodoform	gr. ¼.
Tannin	gr. 4.
Ext. caffeine	q. s.

To be made into a confection which may be taken at meals. He has found it of service in the iodoform treatment of phthisis.—*Journ. de Méd.*, January 15, 1888.

Iodine in Ascites.—DR. RIVADENEYRA, writing in *La Correspondencia Médica* on ascites due not to lesions of the heart, kidneys, or liver, but to the general condition of malarial poisoning, speaks highly of the success of iodine applications. He applies the tincture to the surface of the abdomen in strips or fringes, leaving a breadth of clear skin between each. The untouched parts are similarly painted when the iodine has caused the skin to begin to peel off. In cases where the ascites is very considerable, paracentesis is first performed, and the iodine applications commenced a few hours afterward.—*Lancet*, January 28, 1888.

The Treatment of Furuncle and Carbuncle by Spraying with Carbolic Acid.—VERNEUIL, at a recent meeting of the Paris Academy of Medicine, read a paper on this subject, whose conclusions were as follows: Furuncle and carbuncle (or anthrax) are but different manifestations of the same infection, to be treated on identical principles. Treatment should be surgical and topical; the use of proper topical remedies will greatly lessen the need for surgical intervention. Carbolic acid spray is a means of topical treatment, antiseptic and anæsthetic, and indicated in these affections.—*L'Union Médicale*, January 19, 1888.

Pancreatic Cyst; Laparotomy; Recovery.—At a recent meeting of the "Verein der Aerzte in Steiermark," PROF. WÖFLER showed a girl in whom an incision of a cyst of the pancreas which was covered by the stomach was successfully performed. A longitudinal incision reaching from the xiphoid process to the navel was made; the stomach which lay before the tumor had to be lifted, and the transverse mesocolon was split. After the puncture of the tumor a rather large quantity of liquid escaped, which, on chemical examination by Prof. Taksch, proved to contain ferments, hence the diagnosis was thus confirmed. It was found impossible to extirpate the cyst; it was, therefore, filled with antiseptic substances, and sutured to the abdominal walls. The patient's life was

for a long time in danger, fever supervened as the margins of the cyst became gangrenous. She is now quite healthy, and a scar of the length of the section which had been made is to be seen in the middle of the abdomen. This was the first case in which a pancreatic cyst was diagnosed in, and removed from, a woman.—*Medical Press*, January 25, 1888.

Angioma of the Epiglottis.—In the *Revista de Ciencias Medicas*, DR. C. M. DESVERNINE reports an example of pedunculated angioma of the epiglottis. The patient was a man, aged fifty-three, of robust constitution, who for two months before he came under notice had suffered from occasional slight bleeding from the throat. On November 14th, he lost a large amount of blood, and the hemorrhage only ceased on syncope supervening. Laryngoscopic examination showed an ovoid tumor of lobulated appearance and dark blue color, and measuring $\frac{3}{4}$ of an inch in length by $\frac{1}{2}$ in breadth, springing from the laryngeal surface of the epiglottis to the left of the middle line, about midway between the base and the apex. The tumor was attached by a short pedicle, and there was no infiltration of the tissues around its root. On November 27th, the pharynx and larynx having first been anæsthetized with a concentrated solution of cocaine, the tumor was removed with the galvano-caustic snare. The only trace of the operation was a small eschar which came away a few days later, leaving the site of the tumor completely healed. Microscopic examination showed that it was an angioma enclosed in a fibrous capsule.—*British Medical Journal*, January 21, 1888.

The Treatment of Uræmia.—ROLLAND has found the following prescription useful:

Ext. jaborandi (alcohol),
Ext. scillæ,
Resin. jalap.,
Resin. scammon. āā gr. $\frac{3}{4}$.

In pill form.

Four or five pills in twenty-four hours, with an exclusively milk diet, yielded good results.—*Journ. de Méd.*, January 15, 1888.

An Unusual Cause of Death after Laparotomy.—At a recent meeting of the Berlin Obstetrical Society, OLSHAUSEN reported several cases of laparotomy, in which the intestines were necessarily removed from the abdomen during the operation. The patients in question had been taken with symptoms of collapse a few days after the operation with symptoms of strangulation. Death occurred five or ten days after operation. Olshausen explained the fatal result through paralysis of the intestine and consequent absorption of poisonous feces. The intestinal paralysis is produced by the disturbances in circulation occurring in the intestine when removed temporarily from the abdomen, it is dependent on venous hyperæmia and extravasation.—*Centralblatt für Gynäkologie*, January 7, 1888.

Stone in the Stomach.—Concretions, or stones, are not often found in the human stomach, though the bezoar of the abomasum and intestines of ruminants is well known, and in olden days was very highly esteemed as a remedy against poisons and infectious diseases, being even worn

as a charm. Human intestinal agglomerates are occasionally found in oatmeal-eating districts, and have sometimes been dignified by the name of "avenoliths." An enterolith was found by Laugier in a human subject, the nucleus of which was formed by a piece of liquorice root. True gasteroliths are, however, occasionally found in human stomachs; thus Schönborn was able to collect seven such cases, all of which appeared to have formed round a nucleus of hair; one of these weighed two kilogrammes. Quite recently a Dutch physician, Dr. H. A. Kooyker, has described a case of true gastric concretion weighing 885 grammes, in which there was no nucleus at all. The patient was a middle-aged man, who was so averse to examination and manipulation of all kinds that it was very difficult to form a diagnosis of his disease. He occasionally vomited blood, and gradually became more and more emaciated. A tumor was felt in the epigastrium, but its nature was not made out until the post-mortem examination revealed a stone measuring eighteen by eight centimetres nearly filling the cavity of the stomach. There was also a smaller stone situated at the pyloric extremity. These stones were of a brownish color, and the large one contained several cavities. It had an offensive smell like that of feces. A number of vegetable cells were found in it, but it was devoid of concentric or other structure. It does not seem to have been fully analyzed.—*Lancet*, January 28, 1888.

A Poisonous Ptomaine in Expired Air.—At a recent meeting of the French Academy of Sciences, BROWN-SÉQUARD and D'ARSONVAL reported experiments which confirm their previous studies, showing that by condensing the vapor of air expired by human beings, a liquid is obtained containing a poisonous ptomaine, which produces, when injected into the bodies of animals, symptoms of septic intoxication. When exposed to a temperature of 212° F. this fluid increased in virulence, showing that bacteria are not its potent factor. Post-mortem examination of animals poisoned by this substance showed extensive disorganization of the blood.—*Gazette Hebdomadaire*, January 20, 1888.

Lithium, in Effervescing Water.—The following powder, in a wine glass of common soda, is a convenient form of administering lithium:

Lithii carbonic. gr. 38.
Sacchar. albi. 3 12½.

From 15 to 20 grains of the powder is a dose.—*Therapeutische Monatshefte*, January, 1888.

Pernicious Anæmia and the Bothriocephalus Latus.—DR. CHAPIROW, a Russian physician, narrates of a lad suffering from a grave form of anæmia with febrile symptoms, extravasations of blood from the mucous surfaces and beneath the skin, etc., without any visceral disease to account for his condition. On examining the blood under the microscope the red corpuscles were found to be six times less numerous than in health, a veritable *oligocythemia rubra*. The patient's stools contained an abundance of ova. After the successful administration of a vermifuge the condition of the patient rapidly improved, and in a very short time the anæmia and its collateral symptoms disappeared.—*Medical Press*, January 25, 1888.

The Treatment of Diphtheritic Angina by Carbolyzed Douches.—ROULIN, in the *Journal de Méd.* of January 22, 1888, reports that he has treated 79 cases of diphtheria by douches of

Phenol sodique	3 tablespoonfuls.
Water	1 quart.

without a death.

He regards the treatment as most successful in croup also. The douche was given by pressure upon a rubber bag, filled with fluid, resembling a Politzer's bag; the child was seated upon the side of the bed and a napkin put about its throat.

Intra-peritoneal Rupture of the Bladder; Laparotomy; Recovery.—WALSHAM, of London, reports the following case in the *British Medical Journal* of January 28, 1888.

C. H., aged twenty-two, was admitted March 1, 1887, into St. Bartholomew's Hospital, under the care of Mr. Walsham. He had been drinking the night before, and in a fight was butted by his opponent in the abdomen, his bladder being full at the time. He passed a night of great agony, and was brought in a cab to the hospital the following morning, but he was then suffering very little shock, and walked into the surgery with the assistance of two friends. He complained of pain in the lower part of the abdomen, and of having been unable to pass any urine since the blow, although his bladder was uncomfortably full at the time. The perineum was natural, and there was no history of stricture. On passing a catheter no urine flowed, although the point was ascertained to be in the bladder by the finger in the rectum. On depressing the handle the catheter was felt to free itself with a jerk, and its point could be then felt more plainly than natural through the abdominal walls. Bloody urine now escaped, the flow varying with respiration. About twelve hours after the injury Mr. Walsham opened the abdomen, and having discovered an intra-peritoneal rent in the posterior wall of the bladder, sewed it up with nine Lembert sutures. The sutures were passed through the muscular and peritoneal coats only, and one was placed above and below the upper and lower angles of the wound respectively. The bladder having been forcibly injected with eight ounces of boric acid solution and found watertight, the peritoneum was irrigated with about two gallons of warm boric acid solution, and the abdominal wound closed as in ovariectomy. A catheter was left in the bladder for two hours, and the patient subsequently reminded to pass his urine every four hours. There was little shock, and the patient recovered. Daily notes were given at length. The author remarked that there had now been seventeen cases in which abdominal section had been performed for rupture of the bladder, three extraperitoneal and fourteen intraperitoneal. Of the three extraperitoneal cases two died and one recovered. In the successful case the wound in the bladder was secured to the abdominal wall but not sutured. In the fatal cases death was due to shock. The rent in one was found securely sutured at the post-mortem examination; in the other the rupture had not been discovered on opening the abdomen. Of the fourteen intraperitoneal ruptures the rent in the bladder was sutured in eleven, and in three a drainage tube was placed in the wound but no sutures employed. Of these three one recovered and two died,

death being due to peritonitis and suppression of urine respectively. Of the eleven cases where the rent in the bladder was secured by sutures five recovered and six died, death being due in three cases to peritonitis, in two probably to shock, and in one to hemorrhage from a perineal incision employed for exploration. In the three cases of peritonitis the sutures had given way in one, and a leakage had occurred in the lower part of the wound in the other two. In the five successful cases Lembert sutures were employed, and the peritoneum was washed out, and in only one was a drainage tube used. The author discussed: 1, the advisability of early operation; 2, the importance of using a suture which will not become softened too soon, and of ascertaining before closing the abdominal wound that there is no leakage from the bladder; 3, the cleansing of the peritoneal cavity; 4, the inadvisability of a preliminary incision in the perineum, or of a subsequent incision in that region for the purpose of drain; and, 5, the question of tying in a catheter after the operation. A table of the seventeen cases was given, sixteen of which are in Sir William MacCormac's table appended to his work, *On Abdominal Section*.

The Local Treatment of Eczema.—BROcq, in the *Revue Clin. et de Thér.* of January 19, 1888, adds to the formulæ he has already published the following:

Salicylic acid may be prescribed as follows:

Acid. salicylic.	gr. 15.
Tinct. benzoin.	℥ 30.
Vaselin.	3 12½.

Acetate of lead, as follows:

Liquor. plumbi subacet. dilut.	3 i.
Vaselin.	gr. 75.
Lanolin.	3 io.

Vidal has obtained good results by the simple lead plaster of the Pharmacopœia, which he combines as follows:

Emplastr. plumbi	parts 60.
Ceræ flavæ	parts 25.
Ol. olivæ	parts 40.
Dextrin.	parts 2.
Aquæ	q. s.

Cod-liver oil plaster may be made after the following:

Empl. plumbi	parts 60.
Ceræ flavæ	parts 25.
Ol. morrhuae	parts 35.
Dextrin.	parts 2.
Aquæ	q. s.

Each of these combinations is to be thoroughly mixed, and spread upon suitable material.

Carl Braun's Method of Performing Hysterectomy.—In a recent number of the *Wiener Medizinische Wochenschrift*, Professor Charles Braun gives an account of thirty-eight cases of hysterectomy for fibroids, performed in the General Hospital, with only six deaths, that is to say, a mortality percentage of 15.5. The results which he had thus obtained were 2 per cent. behind those of Hegar, Kaltenbach, Bantock, and Keith, and about 16 per cent better than the results obtained by the Berlin

gynecologists. Professor Charles Braun is strongly in favor of the extraperitoneal treatment of the stump, as both the cases in which it was treated intraperitoneally ended fatally. According to him, the following are the indications for hysteromyotomy: 1. Attacks of pain during menstruation or in the intervals between the periods, which recur frequently and render the patient unfit for work of any kind. 2. Functional disturbances from pressure on the neighboring organs (bladder, rectum, kidneys, stomach, or lungs) involving risk to life. 3. Severe metrorrhagia, in which a cure cannot be obtained by any less radical procedure. Instead of the aseptic sponges he in most of his cases uses mull gauze which has been for twenty-four hours before the operation boiled in a 1 per cent. solution of sublimate, and which is afterward washed in clear water. Immediately before and during the operation the gauze is wrung out of a hot solution of thymol (1 in 1000), and used for stopping the bleeding from the peritoneal surfaces after ligation of the bloodvessels. A solution of sublimate or carbolic acid is never brought into contact with the peritoneum. After the tumor has been brought forward the abdominal wound is temporarily closed by means of hooked forceps. The peritoneum of the abdominal wound is sutured above and below the stump, and the latter is fixed to the peritoneum of the abdominal wound by means of a mattress suture. Both the oviducts and the ovaries are separately ligatured with silk threads. Only after the closure of the abdominal wound by means of silk button sutures the tumor is removed, the stump being touched with the actual cautery and covered with benzoate of sodium. The extraperitoneal treatment of the stump in cases of hysteromyotomy is specially advantageous when the myomata are situated in the wall of the body and the fundus of the uterus, but less so in those myomata which are situated between the walls of the cervix, the lips of the os, and the broad ligaments.—*British Medical Journal*, January 28, 1888.

A Paste for the Treatment of Pemphigus.—UNNA, in *Monatshefte für Praktische Dermatologie*, No. 2, 1888, prescribes the following:

R.—Ol. lini,
Aq. calcis,
Zinc. oxidat.,
Cretæ āā equal parts.

M. f. pasta.
Sig. For external use.

Nephralgia Simulating Renal Colic.—MALÉCOT, in a recent number of *La France Médicale*, combats the idea that nephralgia occurs frequently without the passage of renal calculi, although of small size. He has observed cases frequently where pains much less severe than those called renal colic were followed by the passage of gravel, especially in the gouty. He believes that small particles of uric acid may accumulate in the pelvis of the kidney, and passing at considerable intervals produce the pains of nephralgia. He believes that greater care in diagnosis would confirm his views.

A Study on the Etiology of Phthisis.—R. W. PHILIP, of Edinburgh, concludes from a series of experiments upon the sputum of phthisis that (1) in view of the work of Koch, it is impossible to avoid admitting that a causal relation-

ship exists between the tubercle bacillus and the phthisical process. 2. The mere predication of this relationship is not sufficient in explanation of the clinical facts and the generally fatal termination of such cases. 3. The usually received explanations of the *modus moriendi* in phthisis are insufficient. 4. It appears probable that the lethal influence of the bacillus is due to the production thereby of certain poisonous products. 5. Clinical and experimental evidence appears to indicate that the morbid secretions from the respiratory surfaces afford a good medium for the growth of the tubercle bacillus, and, presumably, for the elaboration of such products. 6. Such a product is separable from the carefully selected and prepared sputum. 7. This product is possessed of well-marked physiological properties, being eminently toxic to frogs, mice, and other animals. 8. The toxic properties of the product are, speaking generally, depressant. 9. More particularly they include a marked depressant influence on the heart. 10. This depressant influence seems to be exerted through the medium of the cardio-inhibitory mechanism. 11. The toxic action of the product is more or less completely opposed by atropine. 12. The amount of the product which may be separated appears to bear a distinct relation to the abundance of the bacillar elements present. 13. Absorption of the poisonous product most probably occurs by way of the lymphatic circulation.—*British Medical Journal*, January 28, 1888.

Tertiary Syphilitic Ulceration of the Penis.—BOUSQUET, in the *Revue Gén. de Clin. et de Thér.* of January 19, 1888, states the following conclusions: Specific ulceration of the penis is of three distinct forms: gummæ, ulcers, and vegetations. The diagnosis of these lesions is sometimes very difficult, and the patient's statements regarding his antecedents are not to be depended upon.

The treatment by mercury and potassium iodide combined is the best diagnostic test. In a patient older than forty, who has ulcerations upon his penis, surgical procedures should not be employed without a trial of medication, regardless of the patient's statements.

The Antiseptic Treatment of Phthisis.—SPENCER, in reporting a case of pulmonary tuberculosis, successfully treated by iodoform, concludes that in our treatment and general management of these cases, it is our aim to promote or bring about healing of the damaged lung tissue, and this by means of fibroid substitution. In order to attain this end, we must secure the same conditions and adopt similar measures, if we can by any means compass it, to those we find successful in dealing with suppurations, ulcerations, and the like lesions, in parts exposed to view. To secure these conditions, we should adopt measures for supplying adequate nutrition—that is, adequate anabolism of tissue and the storing of energy—in the body generally, and in the damaged part in particular. We should deal with pyrexia on its own account, as a general and constitutional state, apart from the local suppuration or ulceration (as by quinine). We should bring the lesion under the influence of antiseptic remedies, both by internal medication (as by iodoform), and by external applications (as by inhalations of eucalyptol); and the application and influence of the antiseptic should be complete, continuous, and prolonged.—*British Medical Journal*, January 28, 1888.

THE MEDICAL NEWS.

A WEEKLY JOURNAL
OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication. When necessary to elucidate the text, illustrations will be furnished without cost to the author. Editor's address, No. 1004 Walnut St., Philadelphia.

SUBSCRIPTION PRICE, INCLUDING POSTAGE,
PER ANNUM, IN ADVANCE \$5.00.
SINGLE COPIES 10 CENTS.

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in registered letters.

Address, LEA BROTHERS & CO.,
Nos. 706 & 708 Sansom Street,
PHILADELPHIA.

SATURDAY, FEBRUARY 25, 1888.

RESPIRATORY THERAPEUTICS.

FOR various reasons the study of respiratory therapeutics has received but little attention from American physicians. During the last few months several investigators have taken up the subject, but they have devoted their efforts almost exclusively to the pneumatic cabinet and its limited application. While it is evident that we cannot command all the apparatus at the disposal of our continental colleagues, we believe that much can be done with simpler means. Quite recently (*Zeitschrift für klin. Med.*, 13 Bd. 2, 3, and 4 Heft.), SCHREIBER has proposed some additions to the therapeutic armamentarium which we believe to be of real value, and think that by calling attention to them we can, perhaps, excite a trial of them by some of the investigators now endeavoring to solve the clinical problems involved.

These improvements consist in the use of a compressor and an elastic corset. The former is made of two plates, of a shape and size to fit the thorax in front and behind, connected by arms which allow of their mutual distance being increased or diminished, and the pressure they exert graduated in that way. The corset is much like an ordinary one, but fastened in front by a strong elastic band by means of which the pressure may be graduated circularly in any level of the thorax.

The value of these instruments can be understood by considering the objections long urged against the use of local treatment in thoracic disease; objections

shown by Schreiber in some new experiments to be well founded, but capable of more or less complete suspension by the use of his inventions.

It can be demonstrated that in the ordinary application of medicated vapors and compressed or rarefied air, the diseased parts of the lungs are less exposed than the sound parts, or uninfluenced by the therapeutic attempt. By the use of properly applied compression, however, Schreiber claims that the normal parts of the lung can be entirely set at rest, and that, when this happens, the diseased part becomes at once capable of being acted upon by the medication or differentiation. As in all local treatment, thoroughness of application is of the utmost importance, and the longest possible contact of the remedy with the diseased site must be attained. Not less important is the proper selection of the remedy to be applied, and in estimating the results it must be remembered that no more should be expected of local treatment in the hands of the physician than is warranted by the common experience of surgery. Schreiber claims that in cases of atelectasis and insufficient expansion of the lungs following pleural exudates, severe acute pneumonia, adhesions, and pneumothorax, the value of the compressor can be easily demonstrated.

In catarrh, or ulceration, abscess, gangrene, and tuberculosis, less is to be looked for, and disappointment not so much to be feared from the mechanical as from the pharmacological factors in the method. Schreiber's arguments in favor of circular compression in chronic emphysema and the secondary atelectasis following long-continued coughing in that disease, are plausible, and, according to him, the new methods seem much more likely than the older ones to remove the anatomical basis of the emphysema.

It is evident that the *post hoc* arguments of single observers cannot lead to a definite advance in respiratory therapeutics. Experiments on animals are excluded by the differences in the form of the animal and human thorax. With the pneumatic cabinet and any ordinary atomizer, and such compressors and corsets as are mentioned above, it would be easy to ascertain the value of the improved therapy, and, premising a proper adaptation of medication and method to individual cases, we believe it fruitful of good results.

JOSEF HOFMANN'S HEALTH.

JOSEF HOFMANN, the musical prodigy, is an intelligent-looking boy, ten and a half years of age. He

now weighs sixty-three pounds. When he left Europe for this country, he weighed fifty-six pounds. He began to study music at the age of about five years. The *technique* of the piano was to him unusually easy, and his musical memory was remarkable and did not require much special cultivation. His muscles are well developed for a boy of his age, especially those of the arms and hands. His hands, though of ordinary size, are very thick and strong. He presents absolutely no evidence of any organic, nervous, or other trouble. He eats and sleeps well, and takes four meals a day. His movements and demeanor, when subjected to medical examination, are quick and nervous. He says, himself, that he is fond of playing the piano, but is tired of playing in public. According to his father's statement he now practises very little, and it is not often necessary for him to rehearse before performing in concert. His variations and improvisations on given themes are spontaneous, and the skill which he possesses in this regard is the result simply of what he has learned from hearing music. He has never made a serious study of harmony and composition.

His work at concerts has lately been very considerable, almost excessive; but it is understood that the programmes have been made by his father and his father's musical agent, and that he has often, in Europe, done as much. At his last concert, he played a long concerto by Beethoven, with orchestra, a polonoise with orchestra, a duet with harp, an improvisation, and four solos. He says that he was very much fatigued after this concert, which occurred in the evening, that he urinated freely after each piece, and wet his clothing while performing. His urine has been frequently examined, and has always been found normal. A specimen passed in the presence of physicians in consultation in his case on Monday last, had a specific gravity of $1024\frac{1}{2}$, was acid, contained no albumen, or sugar, presented a deposit of a faint cloud of mucus on standing for eighteen hours, and had $10\frac{1}{4}$ grains of urea per ounce. He does not and never has suffered from enuresis. He complains that he is much fatigued by travelling. He plays with toys, etc., like other boys of his age, but much of his time is taken up by a certain amount of work which he has to do in public. It is evident that his concerts have become irksome to him, although his intense love of music is undiminished.

As far as it is possible to judge at present from a physical examination, his work in this country has

not impaired his general health. Assuming the accuracy of the statements with regard to his incontinence of urine during public performances, this is the only indication of any excessive nervous strain. The stains on his clothing are very slight, although it is said that his mother has observed them for several weeks. It is positively stated that he does not suffer from incontinence when playing or practising at home.

The general education of the boy has been somewhat neglected, but he speaks and writes Polish, which is his native language, German, and French. He is evidently intelligent, and has considerable mechanical talent. He is also fond of drawing and painting. As regards the future, and the prospects of the full and mature development of the great musical genius which Josef Hofmann undoubtedly possesses, prudence dictates that he should avoid any possibility of overwork.

Judging from the existing conditions and indications, there seems to be no sufficient reason why his public performances should not be continued in moderation; but excessive physical fatigue, as in travelling, should be guarded against, and the part which the boy bears in his concerts should certainly be curtailed. He ought not to be called upon to play at any concert more than one serious composition for the piano, or orchestra, one short solo, and one improvisation; and he should have ample time for rest between his public performances.

It should be borne in mind, also, that Hofmann is no ordinary child. His performances are not merely mechanical displays of technical skill; but they involve a condition of nervous exaltation which is evident enough from the poetic and artistic feeling with which he interprets musical compositions of the highest order.

FATAL POISONING BY QUININE.

DEATH so rarely occurs as the result of the ingestion of this drug in large amount that the paper of HUSEMANN, in the *Therapeutische Monatshefte* for January, 1888, is of great interest. A number of the text-books on materia medica and therapeutics state that no deaths are reported, and it has been generally supposed that the reason for this was the fact that just so soon as the excess of quinine reached the small intestine it was precipitated, and so discharged with the feces. It is evident, too, that the irritant effects of large amounts of quinine are liable to pro-

duce not only vomiting but purging, both of which actions would aid in the recovery of the patient.

Death is, of course, readily produced by quinine, if given hypodermatically, and the early symptoms of the poisoning are so familiar to every one as to need no mention here. It will be remembered, too, that where death is produced great meningeal and cerebral congestion is always present, with, in some instances, hemorrhages into the middle ear, the blood dark and readily coagulable, and preceding death, in rare cases, a peculiar condition is developed in which the animal beats its head constantly on the floor as it lies on its side.

The three cases themselves, as recorded by Husemann, are taken from a paper by Kinner, of St. Louis, and but two of them were fatal. The salt was the sulphate, and was prepared by William Warner & Co., of Philadelphia. In the first case a child of three and a third years swallowed about twenty-five two-grain sugar-coated pills, shortly afterward complained of headache, vomited, passed into a condition of stupor, and this was followed by death in about one and a half hours after the taking of the drug. In the second case a girl two years old took from eight to ten two-grain pills, and was given an emetic, but died, in about two and a half hours, with rigors and a convulsion. In the third case a somewhat corpulent woman of sixty years, with intermittent fever, took upward of one hundred grains, and was found by Kinner with a pale, cool skin bedewed with sweat, and suffering from dyspnoea. The pulse was small and feeble. Coffee and whiskey were given freely, and recovery took place, although severe ear-ache followed the next day.

The treatment of such a condition resolves itself into the treating of circulatory disturbances, which are always great, owing to the depressing effect of quinine on the heart, by the use of cardiac and also of respiratory stimulants; the use of tannic acid to form a tannate, to be followed by a mild purge, and the maintenance of bodily heat.

DR. EDWARD JACKSON has been elected Professor of Diseases of the Eye at the Philadelphia Polyclinic.

AT Waldeck, Germany, a law has been adopted forbidding the granting of a marriage license to any person who has become addicted to alcohol.

PROFESSOR KUSSMAUL, after a long and brilliant career, has retired from the University of Strassburg,

where he has held the Directorship of the Klinik for Internal Medicine. Professor Naunyn, of Königsberg, has been invited to succeed him.

At a recent meeting of the Clinical Society of New York, Dr. F. H. Hartley gave the history of a case of supernumerary arm, in a boy about ten years of age. The third arm is on the right side of the trunk, and is quite completely developed, but it has no scapula.

A WOODEN case, containing a complete outfit of surgical instruments has recently been discovered at Pompeii. Many of the implements are said to bear a very close resemblance to those used at the present day.

IN Corea, according to the *Missionary Review*, an American lady, Mrs. Dr. Ellis, is the physician to the Queen, and has apartments in the royal palace. Her salary amounts to \$18,000 per annum.

DR. LILIAN HORTON, a graduate of the Chicago Woman's College, has just sailed from San Francisco to take the position of Assistant Physician to the Queen and Physician in charge of the Hospital for Women.

THE Medical Jurisprudence Society of Philadelphia has elected the following officers for the year 1888:

President.—Charles K. Mills, M.D.

Vice-Presidents.—John A. Clarke, Esq., and Henry Leffmann, M.D.

Secretary.—F. X. Dercum, M.D.

Treasurer.—Paschal Coggins, Esq.

Recorder.—G. Milton Bradfield, M.D.

SOCIETY PROCEEDINGS.

THE PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, February 6, 1888.

THE PRESIDENT, D. HAYES AGNEW, M.D.,
IN THE CHAIR.

DR. W. W. KEEN reported a case of

OMPHALECTOMY FOR STRANGULATED UMBILICAL
HERNIA.

(See page 205.)

DR. HUNT asked if Dr. Keen had looked up the mortality following this operation. He had not seen many cases, but his personal experience is that the prognosis in operations for strangulated umbilical hernia is bad.

DR. GROSS understood that Dr. Keen excised the opening simply for the reason that he could not bring the edges together.

DR. KEEN said the operation was done purposely. He had decided that if he did operate this would be the operation which he should perform.

DR. GROSS asked if he would then prefer this operation to that of freshening the edges and bringing them together?

DR. KEEN stated that he should prefer it.

DR. GROSS remarked that the operation for strangulated umbilical hernia by freshening the edges and bringing them together is not an uncommon one. He had references to a good many cases, but they have not a very good prognostic import. He recently had a letter from a physician who, in a case of strangulated umbilical hernia in a woman, had cut down, reduced the hernia, and sutured the ring. The woman died, and he was subjected to the annoyance of a suit for malpractice. He wrote to him for his opinion. He told him that he had pursued the proper course. It so happened that at the same time he saw in a foreign journal the report of three cases of the same operation, which he sent to him, and he was acquitted.

In operating in cases of strangulated umbilical hernia, he saw no reason for removing the opening or excising the median line, if the same thing can be accomplished by freshening the edges of the ring. On the other hand, he did not know that there are any objections to the procedure.

DR. J. M. BARTON recalled three cases, two of which recovered and one died. In one case, he succeeded in freshening the edges and bringing the wound together. In both of the other cases this was utterly impossible, the abdominal walls being very fat and from two to three inches in thickness, within this fat the hernial sac had burrowed laterally, so that though its contents would fill a twelve ounce graduate, it did not elevate the skin. The description of the contents which had been given by Dr. Keen would apply perfectly to his cases; a mass of omentum folded up like the leaves of a rose, and in the centre of the mass a small knuckle of intestine. In another case he freshened the edges, but he could not pass the stitches on account of the depth of the wound and the portions of omentum in the way. He broke a needle or two before giving it up, and then closed the wound by bringing some of the omentum over the opening and fastening it; this case proved fatal. The third case occurred in the Jefferson Medical College Hospital. He operated and the woman was relieved, but in a few months she again had strangulation, and was operated on by one of his colleagues. She recovered from the second operation also.

If in the future he should have difficulty in bringing the edges of the hernial opening in apposition, he should adopt the method brought to their notice by Dr. Keen. If it were possible in performing the operation to make the section through all the tissues except the peritoneum, and permit this to fold, he thought it would slightly lessen the risks.

DR. W. W. KEEN said that an examination of the literature verifies the assertion that the rate of mortality is very high. He thought that for this very reason omphalectomy is rather to be chosen on account of the harmlessness of abdominal section at the present day; and although here complicated by hernia, yet at the same time, unless the condition of the intestine be very bad, it seemed to him that the rate of mortality should not be

much higher than in ordinary laparotomy. In almost all cases of laparotomy there is some complication which adds to the dangers of the section itself. He quite agreed with the statement of Dr. Musser, that it would have simply been a mechanical impossibility to freshen the edges of the opening and bring them together. As in the case alluded to by Dr. Barton, he found during the operation that the thickening felt for two fingers' breadth around the umbilicus, was due to enlargement of the cyst in the wall of the abdomen.

Another reason for choosing this operation in cases of hernia, is to prevent the return of the hernia. In one of the three cases reported by Dr. Barton, the hernia returned. If omphalectomy is done, the return of the hernia is rendered impossible. He had a firm belief that the mortality will be less than in ordinary herniotomy followed by excision or ligature of the sac. Cutting operations limited to the hernia itself, without opening the peritoneal cavity, without any attempt at removal of the umbilical opening, have already been done in several cases with greater or less success.

OSTEOGENIC POWER OF BONE CELLS.

DR. CHARLES B. NANCREDE, in presenting a specimen, remarked that a great deal of attention has of late been directed to the question of the osteogenic power of the medullary cells. He did not wish to detract from the value of the observations of Dr. Macewen, but he should like to claim for America the priority in the recognition of the osteogenic power of the bone cells. So far back as 1871, it was so well known, that Eve relates in his *Rare Surgical Cases*, that non-professionals on the frontier posts were accustomed to perforate the external table of the skull with an awl in many places in cases of scalping. Over twenty years ago he saw Prof. Agnew resort to the same procedure in case of an injury to the head. The operation succeeded, but the patient, however, died from some encephalic complication.

In 1883, when he was preparing the section on Head Injuries, for the *International Encyclopedia of Surgery*, he called attention to this matter, and mentioned this case. Six months later a patient was brought to the Episcopal Hospital with his arm injured by a calendering machine, in which there are two rollers, one hot and the other cold. The hot roller was applied to the posterior surface of the arm producing a slough of the greater portion of the skin of the forearm, including the muscles and some of the tendons. These were stripped off in a dead state from two-thirds of the circumference and from two-thirds of the length of the ulna. It occurred to him that it would be a good idea to see if the formation of bone would not be facilitated in the ulna by drilling into the medullary cavity of the bone. He drilled a good many holes into the ulna, having to go at least three-sixteenths of an inch before bleeding commenced. The ulna which was secured was very substantial, and more like an uninjured ulna than if left to nature. In a few days granulations sprang up from the ulna and fused with the granulations from the soft parts, and in course of time this fragment was separated.

There are some bones in which we should avail ourselves of the osteogenic formation of the medulla, and there are some in which no such attempt should be made. There are not so many medullary cells in the inferior maxillary as there are in the diploë, so that we may take

out a portion of the skull and have the bone restored; but in the case of the lower jaw, if a piece of the outer plate is removed and then replaced, it is unlikely that the graft will be successful.

DR. KEEN said that the remarks of Dr. Nancrede, with reference to the behavior of different bones, are well illustrated by a case recently under his care. Following the practice of a number of surgeons with reference to the bones of the skull, and also with the view of closing up the canal of the inferior dental nerve in a case of resection of the inferior dental nerve for persistent neuralgia, he lately replaced the buttons of bone that he had removed. Immediately after removal they were placed in a warm solution of carbolic acid, and so preserved until replaced. For about ten days they did perfectly well; then symptoms of irritation appeared, and in four or five days became so severe that he was obliged to open the wound and remove the pieces of bone; after that the case did well. He thought that this procedure was worthy of a trial; but he would scarcely be disposed to try it again. Probably the more compact tissue of the outer layer of the lower jaw, as compared with the cranial bones, may account for the non-viability of the former.

DR. HUNT said that the great practical point to be derived from these facts in reference to bone, is that it will lead to a revival of the old practice which he had always advocated, of not interfering too much, and often making practical resections in cases of compound comminuted fracture. Let the little attached pieces of bone alone, and they may do the work of union. If they separate, take them away. Since antiseptics has become so usual, and the desire prevails to take everything supposed to be irritating away, he had seen many cases of the most beautiful results externally, so far as the healing was concerned, but nothing but an imperfect union inside, simply because much that might have been reparative was removed. That he thinks is a wrong practice.

DR. C. W. DULLES said that *apropos* of what Dr. Hunt had said, he might speak of the case of a little girl, three years old, who was run over by both wheels of a passenger car. He saw her in the middle of the night at the Presbyterian Hospital. He examined the case thoroughly, and considering the tender age of the patient, and the fact that the operation called for, if any were necessary, was amputation, and that children have better chances of recovery than adults, he decided that he would give the child the chance of recovering with her leg instead of that of dying without it. The case was afterward under the care of Dr. De Forest Willard. To make a long story short, the child never had any pain or fever, and made an uninterrupted recovery.

Shortly after this, he saw another little girl, five years of age, who had her thigh caught between a heavy piece of timber and the corner of the curbstone, producing a compound comminuted fracture just above the knee, so close that it was impossible to say whether or not the joint was implicated. In this case also he decided that it was proper to give the child a chance of living with her leg. This case was afterward under the care of Dr. C. A. McCall. There was some separation of fragments of bone, and it was several months before the child was entirely well, on account of sloughing of the soft parts, the result of the contusion. She, however, eventually recovered entirely, with some little malposition of the lower part of the leg.

He mentioned these cases partly to enforce what he considered the very sensible remark of Dr. Hunt, and because he too thinks there is a temptation, on account of the facility which antiseptic methods afford, to remove more than there is any necessity for. It would frequently be a good thing to give nature a chance to recover and let her cast off what she cannot deal with.

DR. NANCREDE said that the same rules hold good with reference to primary, secondary, and tertiary sequestra under antiseptic as under other methods of treatment. He thought that we are not in the habit of removing any more fragments than formerly. If a fragment has no connection with the soft parts it may indeed act as a foreign body, but after Macewen's experience he should be inclined, instead of removing a fragment, to take it out and cleanse it if necessary, and then replace and secure it in some way. He thought that there is no difference under the antiseptic methods as to the removal of fragments, except where it is necessary to secure drainage, and this can be usually accomplished without any serious sacrifice.

He had treated many cases of compound fracture under the antiseptic method, and had seen no difference in the method of union except that we do not have fever and other troubles.

DR. HUNT said that he meant no attack upon antiseptics. It secures beautiful results. He would have the cases treated by antiseptic methods, but at the same time he should let the attached fragments remain to do their work.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 16, 1888.

THE PRESIDENT, A. JACOBI, M.D., IN THE CHAIR.

THE CARE OF THE PAUPER INSANE.

DR. SAMUEL SEXTON presented a resolution endorsing the bill prepared by the State Charities Aid Association regarding the care of pauper insane in State hospitals, and recommending its enactment by the Legislature. It provides that the State shall be divided into as many districts as there are State hospitals for the insane in the State; that there shall be erected on the grounds of each State asylum a sufficient number of buildings of moderate size to accommodate all the pauper insane of the district in which it is situated; that there shall be a uniform charge of all State asylums to the different counties not exceeding \$1.50 *per capita*, per week; that after the completion of the buildings provided for in it it is the intent and meaning of this act that no insane shall be kept under county care within the counties embraced in it (New York, Kings, and Monroe counties are excepted from its provisions); that the State shall pay all expenses incurred beyond the rate of \$1.50 *per capita* per week for the support of the pauper insane; and that the sum of \$500,000 be appropriated for carrying the act into effect.

Those members of the State Charities Aid Association who are as familiar with the management of the State hospitals as they are with that of county poor-houses, find themselves obliged to acknowledge, in accordance with universal testimony, that the care furnished the insane by the State is mostly superior to that furnished by the counties. They know also that the counties do

not propose to give the same character of care to their pauper insane as that given by a State hospital, with its staff of alienist physicians always in attendance, its schools for training nurses, its larger force of attendants, its various organized systems for occupation, instruction, and amusement. This is impossible of attainment for any county at a weekly cost per capita of \$1.50. The expense of new or improved county buildings, and of a larger number and higher grade of attendants, which an advanced and enlightened public opinion now demands for the care of the insane, these two treatments alone—irrespective of maintenance and medical treatment—will impose a heavier burden on the taxpayer of the county than the additional increase of his State tax required to perfect the system already established by the State.

In seconding Dr. Sexton's resolution, DR. C. R. AGNEW said that for thirty years he had been interested, with others, in the amelioration of the condition of the pauper insane in the State of New York, and that the first result of the agitation of this subject had been the establishment by the State of the admirable Willard Asylum. Later those at Binghamton and Poughkeepsie had been started. The opening of these institutions had withdrawn a considerable portion of the pauper insane from the county poor-houses. Now, however, an effort was being made to establish county asylums for the insane. The chief reasons alleged for this measure were the saving, to a considerable extent, of the cost of the transportation of insane patients, and because the cost of maintenance in the State hospitals was unnecessarily great. One of the counties undertakes to care for its insane at a cost not to exceed 97 cents per head per week, and another of \$1.19. At the Willard Asylum, where the number of inmates is nearly 2000, the expenses cannot be reduced below \$2.50 per head per week; but this included the best scientific care by expert physicians and specially trained nurses, the amusement and intellectual training of the patients, and their employment in the workshop and on the farm connected with the establishment. It is a fact, also, that some of the counties have tried the experiment of having their own insane asylums, and unsuccessfully. Thus, Rockland County erected one at an expense of \$20,000, and it has now been abandoned. If the pauper insane are cared for by the counties they will be under the charge of the Supervisors and Superintendents of the Poor, and these men, besides knowing nothing of the proper care of the insane, are altogether too close to the taxpayers. This class of cases can, in fact, only be properly taken care of in an institution where there is a Board of Managers which is directly responsible to the State, and where everything is done under the blaze of public scrutiny; and in the State hospitals he believed that the most enlightened modern treatment of the insane was carried out in as thorough a manner as possible.

The resolution was then unanimously adopted.

DR. H. SEIBERT read a paper on

CHOLERA INFANTUM AND THE WEATHER.

Under the term cholera infantum he said that he referred to all cases of acute gastro-intestinal catarrh in children under five years of age. The paper was based upon observations made during a period of ten years, from January, 1878, to January, 1888, in the children's department of the German Dispensary, and was illus-

trated by a large number of charts. In a similar manner, he said he had endeavored to point out the relation of fibrinous pneumonia to the weather in a paper published in the *American Journal of the Medical Sciences* in 1882. The total number of cases of acute gastro-intestinal catarrh treated at the dispensary during the ten years referred to was 8036. As was naturally to be expected, the greatest number of cases occurred during the summer months, and the fewest in the winter months. Thus, in the ten Julys there were 2443 cases, and in the ten Augusts 1524 cases; while in the ten Februarys there were only 117 cases. The monthly averages, however, were simply guides in the present inquiry, and it was not enough to take these alone. His statistics, as well as those of the Health Department, showed that the disease exists all the year round, even in the coldest weather, and that the proportionate mortality is just the same in cold as in hot weather—about one case in every four proves fatal.

It is a somewhat remarkable fact that the number of cases and deaths is always much greater in the month of July than in August. Thus, during the ten years the number of deaths reported in the city of New York in July amounted to 12,428, and those in August only to 6205. In July, 1881, when the mean temperature was 80°, the number of cases treated at the dispensary was 290; in August of the same year, when the mean temperature was 82°, the number of cases was 223; and in September, when the mean temperature was 87°, the number of cases was 137.

During the summer months it was found that the number of cases and of deaths bore no relation whatever to the rise and fall of temperature, and the same was true as regards the range of humidity; so that warm moist weather does not predispose more to the disease than warm dry weather. Dr. Seibert said that he had also made a very thorough investigation of the effect of light and heavy rainfall; but totally without result. Previous to this it had been a favorite belief with him that want of water on the upper floors of tenement-houses was a somewhat important factor in the causation of summer complaint in the city. Local rainfall also had no effect; and the same was true in regard to the velocity of the air-current. Six years ago he said he had first pointed out the necessity of careful study of details, rather than of general averages in connection with such subjects as this.

As yet it is a disputed point whether direct heat is capable of causing the disease in question, and he has made a special study of all the hot days in the ten summers (when the temperature reached 85° or higher). According to the prevalent opinion, the months containing the greatest number of hot days ought to have the greatest number of cases and of deaths; but he has found no evidence supporting this idea. Thus, in the last two weeks of June, 1880, there was a large proportion of these hot days, and in the same period of 1887 there were but few of them; yet the number of cases was just about the same in both of the fortnights mentioned. Again, in July, 1881, when there were but few hot days, there were 290 cases; while in July, 1887, which was considerably hotter, there were only 196; a ratio of 3 to 2. In July, 1884, the temperature never reached 90°, there were but three days when it went above 85°, and but eight days when it went above 80°, yet there were 266 cases; while in August of the same year, which was

a much hotter month, there were only 156 cases, or about one-third less. The difference in mortality in the city during the two months was even more marked; the number of deaths being 1109 in July, and only 633 in August. Yet this July was made up for the most part of what is usually regarded as very healthy weather; little excess of heat, frequent showery days, and many days with strong westerly breezes.

How, then, are we to account for the fact that in the warm months there are always such a large number of cases? It is evident, from the facts just pointed out, that *hot* weather is not necessary for the production of the disease. In regard to *warm* weather, however, the case is different, and the statistics collected showed that in the early part of the warm season, as soon as the minimum daily temperature reached 60°, and this continued for a few days, an increase in the number of cases of acute gastro-intestinal catarrh was noticed. Furthermore, if the minimum daily temperature remained above 60° for a number of days, say a week or more, it was noticed that the disease became epidemic; and this, no matter how high above 60° the temperature might go, whether it was 75°, 80°, or 85°. These facts were found to be true in every one of the ten years which the statistics embraced.

The reverse was noticed at the close of the warm season in October, the month of departure. During the first half of the month the minimum daily temperature usually reached 60°; but in the latter half, when colder weather set in, the end of the epidemic occurred.

An examination of every summer month, and of every day of each month during the ten years, had led him to the following conclusions:

First. Hot weather, either dry or moist, is not necessary for the epidemic appearance of acute gastro-intestinal catarrh.

Second. Warm weather, either dry or moist, showing a minimum daily temperature of not less than 60°, brings on the epidemic every year, irrespective of the maximum daily temperature.

Third. The disease loses its epidemic character as soon as the minimum daily temperature falls below 60°, as in October.

Fourth. Therefore, this disease cannot be brought about by the direct effects of high temperature upon the child's body.

Dr. Seibert then went on to say that the lowest temperature of each day is reached during the night; and it is at this time that the milk which furnishes the principal food of so many young children is brought into the city. It is often carried long distances, being jolted about, and absorbing impurities from the time it leaves the car. It is, therefore, only a question of time how far the decomposition of the milk is advanced by the time it reaches the child. It is well known that a low temperature retards decomposition, and Dr. Cyrus Edison, of the New York Health Department, had informed him that, in his experience, he had found that milk usually began to turn whenever the temperature reached 60° or higher. Chief Engineer Birdsall, of the Department of Public Works, had also informed him that he had noticed that whenever the temperature of Croton Lake rose to 60°, or above, there was a peculiar taste about the water, which was, no doubt, due to the decomposition of certain matters contained within it.

As to the point why there are always so many more cases and deaths in July than in August—the difference usually amounting to one-third—it seemed to him that it might be explained by the circumstance that it takes a few weeks, after the onset of warm weather, to arouse fully the tenement-house population of the city to the danger to which their children are exposed from this disease, and to cause them to take the necessary precautions, as regards diet, fresh air, sanitary conditions, etc., for its prevention.

DR. L. EMMETT HOLT quoted some statistics of a Liverpool physician for the five years ending with 1883. In one of these years the mortality amounted to 347 in July, and 969 in August. The average temperature of July was 58.9°, and of August 59.2°; and this would seem to confirm Dr. Seibert's statement, concerning the increase of the disease when the temperature approached 60°. In September, however, when the average temperature was only 55.9°, there were 589 deaths, which, while much less than the mortality of August, was considerably greater than that of July. Still he thought that this might, perhaps, be explained by the fact, which he himself had noticed repeatedly, that a very hot August is apt to be followed by a high mortality in September, irrespective of the degree of heat in the latter month. Very much the same ratio, as regards the different months, was observed during the other years covered by the Liverpool statistics.

Dr. Holt then went on to say that in summer there are different forms of diarrhoeal disease in young children, and that he scarcely thought it advisable to class them all under one head. In the production of what is ordinarily known as "summer complaint" he believed that there are four principal factors, viz.: (1) heat; (2) feeding; (3) sanitary conditions; and (4) constitution; and that the most important of these is heat.

DR. J. LEWIS SMITH said that he quite agreed with Dr. Holt that the cases are by no means all of the same disease. He had some cases in the warmest weather in which there was an aggravation of the symptoms resulting from reduction of temperature. The child took cold, and the disease was then apt to assume a dysenteric tendency. He thought there is perhaps a fallacy in comparing summer diarrhoea with the diarrhoea met with in cold weather, as he believed the latter to be a different affection from the former. In the cooler months the causes of the trouble are usually so different that it is unjust to compare the two diseases, although the lesions may be the same. The difference between the two is as great as that between the bronchitis incident to pertussis or measles and idiopathic bronchitis.

It seemed to him also that we might be misled by the number of deaths reported. Thus many of the deaths occurring in August or September might be in children who contracted the disease in the earlier part of the summer. The mortality, as a rule, was somewhat greater in September than in May, although the temperature was usually lower in the former than in the latter month; and the reason was because many of those dying in September had been taken ill in one of the previous months. He had noticed in his own statistics the difference between the mortality in August and that in September.

It could be stated in a general way, he thought, that the disease known as summer complaint is caused by heat; but in what way the heat operates to produce

it is not as yet fully ascertained. It is evident that heat alone is not sufficient for its production, or else the disease would be found prevalent in the country as well as in the city. It must be a fact, therefore, that there are certain causes which are brought into operation by the unsanitary conditions met with in the city in hot weather. How much gaseous exhalations have to do with the causation is not determined. At all events the opinion is gaining ground among the best observers that summer diarrhoea is a microbic disease. It is well known that milk which has begun to decompose has a tendency to give rise to the affection. In Asiatic cholera the causative agency of Koch's bacillus has now been pretty generally accepted, and it is believed that this microbe is received into the mouth and acts as a source of irritation to the intestines by its actual presence, and not by causing decomposition of food. In like manner it does not seem unreasonable to suppose that microbes may act in the same way in some cases of summer complaint.

DR. A. CAILLÉ said that the investigations of Dr. Seibert had not only confirmed the general opinion that warm weather is an important factor in the causation of summer diarrhoea, but had also brought out a number of interesting new facts. In his opinion decomposing milk is the chief exciting cause of the trouble. While Dr. Seibert was on the whole, no doubt, right, it was his opinion that high temperatures sometimes have a pernicious effect upon the human body, and thus serve to pave the way for some agency which will give rise to summer complaint. It is a fact that children nursed at the breast or brought up upon some of the numerous infants' foods in the market, who never get cow's milk, will sometimes be attacked with serious diarrhoea if allowed to overload their stomachs in warm weather, while they will suffer but little, if at all, under the same circumstances in cold weather.

Two French physiologists made some experiments by exposing animals to a continued temperature of 104°, and the phenomena which they noticed to result from this exposure were (1) increase of nervous excitability, (2) nervous depression, and (3) convulsions, coma, and death; death resulting more speedily in a moist high temperature than in a dry one. The same results had been noticed to be produced in children when the weather was very hot. It was his opinion, therefore, that while high temperature does not directly produce diarrhoea, it does have a pernicious effect upon the system, and under these circumstances any irritating substance would be likely to give rise to diarrhoea. As regards the smaller number of cases of summer complaint, as well as deaths, in August than July, he thought that perhaps one reason for this was that a much larger number of children leave the city in August than in July, while those which remain have the advantage of the numerous fresh air excursions then provided for the poor.

THE PRESIDENT said that there is a great difference in the cases observed. The larger number are of a simple catarrhal nature. In others, where there are serous discharges there is a tendency to collapse. In such cases after death the lesions found in the intestines may be very slight, while several of the organs of the body may be in an advanced stage of granular degeneration. He believed that great heat kills by its direct effect upon the nerves and upon the muscular

system, including the tissue of the heart itself; the high temperature having the effect of coagulating the myosin of the muscles. Intense heat also has a certain influence on the surface of the body, causing an immense dilatation of the capillary bloodvessels. Insufficient nutrition, particularly of the brain, results from this, and thus collapse is brought about. These are the cases which terminate fatally, and they are liable to be met with in well-to-do families as well as among the very poor. The affection referred to constitutes true cholera infantum. The larger majority of the cases met with, however, are of gastro-intestinal catarrh. He had been much interested in the fact demonstrated by Dr. Seibert's investigations that 60° was the turning-point for this disease, and it was especially noteworthy in this connection that Dr. Edson had expressed the opinion that milk began to decompose, and Chief Engineer Birdsall the opinion that water began to be affected by decomposition also at 60°. In conclusion he made some remarks in regard to the importance of proper feeding.

NEWS ITEMS.

The Illness of the Crown Prince.—The *British Medical Journal* of February 11th states that "We learn by special telegram from San Remo that the Crown Prince's symptoms had become so urgent that tracheotomy had to be done on Thursday morning. We are pleased to say that the operation was performed with complete success. It is natural enough that some alarm should be felt by the public that this procedure should have become necessary. Our readers, however, will no doubt remember that we have more than once hinted that such a contingency was not unlikely to arise, and last week we intimated, as plainly as was possible under the circumstances, that the time was not far off when the operation would be imperatively required. It is quite inaccurate to speak of the Prince's present condition as a 'relapse;' the local symptoms have simply become rather suddenly intensified without any substantial change in their character. The possibility of such an event has been clearly foreseen all along, and it has been obvious for some months past to those acquainted with the facts of the case that tracheotomy, sooner or later, was inevitable. We are in a position to state that all these points were fully explained, a considerable time ago, to the illustrious patient himself, and to his relatives, both in Germany and in this country.

"It may be well to emphasize the fact that the necessity for surgical interference which has arisen does not in the least degree contradict the more favorable reports as to His Imperial Highness's condition and prospects which we have lately been able to give. It is still highly probable that the disease is not cancerous, but obstruction of the larynx, however 'innocent' in itself, is a complication that can only be dealt with effectively by the surgeon's knife. It should be distinctly understood that the operation, when done, as in the present instance, merely as a security against possible accidents in the future, is not only very slightly dangerous in itself, but is one of the most successful in surgery. There is no reason why a man suffering from a disease which obstructs the upper orifice of the windpipe, but does not spread to neighboring parts, should not, if tracheotomy is performed in

time, live out his full natural lease of life. If, at any subsequent period, the passage becomes clear again, the tube can be removed; if not, it may continue to be worn with comparatively little inconvenience or discomfort. With a properly constructed instrument the patient is not only free from all risk of suffocation, but is able to speak with perfect ease and distinctness, and can discharge the duties of life, and take part in most of its pleasures, without trouble to himself or distress to others."

A Four Years' Medical Course at Harvard.—From an examination of the last report of the Harvard Medical School, the *Boston Medical and Surgical Journal* of February 16, 1888, concludes that, in plain words, it appears in the first place that not one-half of those who take the fourth year course apply for the fourth year degree. Secondly, the percentage of rejection at the examinations for the fourth year degree is so large, that prudent students may well prefer to take the third year degree at the regular time, rather than to run the risk of having to fall back upon it after failing to get the fourth year degree. During the past four years, the percentage of rejection for the fourth year degree has been 35 per cent., while the percentage of rejection for the third year degree has been only 16½ per cent. Thirdly, it is evident that there have been two sorts of students in the fourth year class: one sort, the most promising men in the school; the other sort, men who need four years of study in order to obtain the third year degree. The number of examinations which the student was expected to pass at the end of the fourth year has been unreasonably large.

The experiment, as a whole, is not yet successful; and such inferences as can safely be drawn from it do not encourage the hope that a fourth year of study can soon be demanded of all candidates for the degree of Doctor of Medicine, unless, indeed, the school shall receive a special endowment to enable it to take this costly step.

Three Years' Study Obligatory in California.—At a recent meeting of the Board of Managers of the Medical Society of the State of California the following resolution was unanimously adopted:

"Resolved, That on and after April 1, 1891, the Board of Examiners of the Medical Society of the State of California will not grant certificates to practise medicine on diplomas issued after that date, by colleges which do not require that all candidates for graduation shall have studied medicine not less than three full years, and shall have attended not less than three full regular courses of lectures, delivered during three separate years."—*Sacramento Medical Times*, February, 1888.

The New Pasteur Institute.—The buildings (*Figaro* states) are already rising over the space of 10,000 metres which the Institute is to cover. Two principal pavilions will contain the laboratories, the amphitheatres, and consulting rooms. There will be no hospital, for, we are told, the Institute "is not a *maison de santé*, but a school." On each side, uniting the pavilions, will be stables, fowl-houses, kennels, and rabbit-hutches for all the animals required for the various researches, which will not be confined to rabies, but will embrace all contagious diseases. Only one department will be devoted to rabies, at the head of which will be M. Grancher, who is

styled "Apostle of the Religion of which M. Pasteur is the Prophet." The second department will be devoted to *inoculations charbonnenses*, swine measles, and calf-vaccination; the director being M. Chamberland. The third will be entirely private, devoted to researches in bacteriology, under M. Dudaux; and the fourth to medical bacteriology, under M. Roux. The building is calculated to cost a million of francs, and the remainder of the funds subscribed will endow the institute, when opened next June, with something like sixty thousand francs (£1500) a year.

The Archives de Tocologie.—On January 1, 1888, this journal passed from the management of Prof. Depaul to that of Dr. Auvard, of Paris.

Fees for Expert Testimony.—The Texas Supreme Court has just decided a case of great importance, not only to the physicians of Texas, but to the entire profession. Dr. J. B. Fearn, of Garrison, sued Nacogdoches County, in a lower court, for payment for expert services as a witness in a homicide case. The amount involved was small, but Dr. Fearn deemed the principle of so great importance that he submitted to the necessary legal expenses to test it. The lower court decided against Dr. Fearn, but the Supreme Court reversed its decision, and directed the payment of his bill.—*Medical Standard*, February, 1888.

Programme of the French Surgical Congress.—The third session of the French Surgical Congress will be held in Paris, from March 12th to the 17th, in the large amphitheatre of the Administration de l'Assistance Publique, 3 Avenue Victoria. Professor Verneuil will preside. The following questions are down for discussion; 1. The Treatment of Gunshot Wounds of Viscera. 2. The Value of Radical Treatment of Hernia as regards Permanent Cure. 3. Treatment of Chronic Empyema. 4. Recurrence of Malignant Growths after Operation: its Causes and Prevention. Surgeons wishing to take part in the Congress are requested to communicate with the General Secretary, Dr. S. Pozzi, 10 Place Vendôme, Paris. The subscription is 20 francs.—*British Medical Journal*, February 11, 1888.

A Parasitic Fœtus.—In the discussion which followed the exhibition of Mr. Owen's specimen of an anomalous sacral appendage, at the Pathological Society, Mr. Baker and Mr. Bland Sutton expressed their opinion that the appendage ought to be considered as a parasitic fœtus. Mr. Sutton also referred to an example of this monstrosity which is at present being exhibited in London. The subject, "Laloo," is a lad from Oudh, aged seventeen years, about five feet two inches in height, and of a very dark complexion. His expression is pleasing and intelligent, and his disposition very cheerful. There is no family history of any monstrosity. The mass, which appears to be of, at the most, very limited sensibility, is attached chiefly to the epigastric region. It consists of the structures forming the shoulder-girdle, including the integuments, which bear a pair of nipples; and of a second part, including the buttocks and lower extremities. The pubes is hairy, the penis well-formed, and its glans uncovered, urine occasionally passing from it. The anus appears to be imperforate. The arms are very long, like those of an American spider-monkey (*Ateles*); the but-

tocks form a projection rather bulkier than a cocoanut; the left foot hangs down nearly as low as the knee. Both extremities present numerous deformities, which cannot be satisfactorily described in this paragraph. Next to the fact that there is a large parasitic foetus dependent from the epigastrium, the most singular feature of the case is the complete separation of the shoulder-girdle from the lower parts of the parasite. The two parts appear to be separately united to the boy's trunk by freely movable joints; they are invested by a common integument, and divided from each other by a deep groove. We understand that Mr. Sutton and Mr. Shattock examined "Laloo" on Wednesday, for the purpose of furnishing the Pathological Society with a full report of the case.—*British Medical Journal*, February 11, 1888.

Women Physicians among the Musselmén.—Three Russian women, graduates in medicine, have established a hospital for diseases of women at Koschan, Persia. Their experiment has proved completely successful. They are reported to have been consulted by 15,000 patients in the last ten months.

The Polyclinic of Humbert I.—On the 19th of January, 1888, the corner-stone of the new Roman polyclinic was laid, in the presence of the King and Queen, and a large throng. This institution is designed to represent the "Alliance of Medical Science and Civil Charity."

"Rations of Iron" for Soldiers.—Eiserne Portionen (rations of iron) is the name given by the *Militär Wochenblatt* to the canned provisions which the German soldier is now compelled to carry in his knapsack or haversack, not for immediate consumption, but for use at those times when his command is removed from the base of supplies or the quartermaster's department is short. It says: "These victuals of iron are, during war, to be used on the evening preceding a great battle; or, better, when, the army making a sudden change of front, the convoys are for a day or two retarded." Much of this canned provision is put up in America, and is said to be both better and cheaper than the German. The seventh corps (Westphalian) commanders have recently experimented with canned chocolate and cocoa, which, though seemingly light refection for a marching column, has, on the contrary, been found excellently adapted.—*Scientific American*, Feb. 18, 1888.

A New Name for Antipyrin.—Considering that the compound is not an antipyretic, but a pain reliever, and that its true chemical name, oxydimethylquinizine, is rather inconvenient, M. Nicot, a well-known pharmacist, has proposed for it the appellation *parodyne*, from two Greek words (*para* and *odune*), meaning "against pain." Thus rechristened, antipyrin could be freely prescribed and dispensed without regard to trade-mark rights. French pharmacists feel sore about antipyrin, not so much, perhaps, because it is of German origin, as because a shrewd device has enabled its makers to evade the patent medicine law and enjoy privileges denied to French pharmacists and chemists.—*American Druggist*, February, 1888.

Adulterated Candy.—The *American Analyst* of February 4, 1888, describes the adulteration practised by certain confectioners as follows:

They replace sugar and fine gum with glucose, vanilla

with tonka and vaniline, almonds with myrrbane oil, butter with oleomargarine, rose with geranium, and fruit flavors with compound ethers. They "dilute" cocoanut with starch, sugar, and terra alba, and use homeopathic, and therefore harmless quantities of dyes and colors which, in ordinary amounts, are injurious, if not destructive, to the stomach. Of course, they do but little harm by most of these practices. Glucose, tonka, oleomargarine, compound ethers, and saccharated cocoanut are, if in good condition, beneficent rather than otherwise. But it is none the less imposition, humbug, and fraud. Let the confectioners adopt the English statute and stamp on every package all the ingredients their goods contain. If this were done to-day there would be the greatest commotion and the wildest excitement their pleasant industry has ever known.

Perry-Davis's Pain Killer.—The *London Medical Press* reports that the quack nostrum known as Perry-Davis's "Pain Killer" was last week expunged from the Register. The effect of this will probably be that every chemist will now have his pain-killer, and in the multitude the life will be eventually crushed out.

Milk from Sewage Farms.—Dr. Carpenter, of Croydon, denied, during a recent discussion in the Society of Arts, that the milk produced on a farm irrigated by sewage is contaminated or less wholesome than other milk. When he became acquainted with the Croydon sewage-farm, they had difficulty in getting rid of the milk, because of the prejudice against it. But by judicious management the prejudice was worn out. The speaker knew, from personal experience, that the children who took the milk were never troubled with any of those illnesses which were said to be due to bad milk, and there were never any complaints of the milk, which was delivered once a day, becoming sour. That was a proof of its power of being assimilated by the body, and that it was of a perfectly desirable character in point of health, he knew from examination of the families who took it. They had now no difficulty in Croydon with regard to the disposal of their milk from the sewage farm.—*The Popular Science Monthly*, December, 1887.

Cremation in France is in an equivocal position. Its advocates have long urged the passage of a law legalizing this method of disposing of the dead. A law passed Nov. 15, 1887, gives to any adult or minor, who is capable of making a will, the right to dictate the manner in which his funeral services shall be performed, their civil and religious character, and the mode of interment, but the conditions of the different methods of sepulture are to be decided by the municipal authorities. The effect of this last clause is that the operation of the law is suspended so far as cremation is concerned, until a decree shall be passed by the Council of State determining, under what conditions it may be permitted. The friends of cremation have persuaded the city council of Paris to urge upon the government the necessity and importance of immediately making regulations which will allow cremation to be practised. While there is progress in this direction, there is a fear that the cremation experiments recently made at the Père la Chaise Cemetery may retard the advancement of the crematory idea. These experiments have been made with the bodies of persons who had died from smallpox in Paris hospitals, and which had been

uncalled for by friends. The necessities of science require many things which are trying to sensitive feelings; they justify anatomical study and autopsies, and the unfortunate person who has neither friends nor home, may owe the tribute of his body to science for dissection. But these requirements should not exclude the respect due to death. The poor of Paris are asking what utility there can be in these crematory experiments, and they believe that the law which orders débris from operating rooms of hospitals to be cremated should furnish sufficient experimental material. Already the fear of the dissecting rooms keeps many poor persons away from the hospitals, and when the fear of ultimate cremation is added to this, it is probable that the measure will become very unpopular with the poor because of fear, and with the rich because cremation will seem to be a sign of poverty and shame.—*Sanitary News*, February 4, 1888.

The Nurses of the Paris Hospitals.—The laicisation of the Paris hospitals will shortly be complete. The religious staff at the Charité was dismissed a short time ago. The laicisation of the Hôpital Dieu and the Hôpital St. Louis will follow in the course of the year. The laicisation of the hospitals was begun in 1878, with the Hôpital Laënnec. Since that time the Administration of the Assistance Publique has organized a training school for nurses at the Hôpital de la Pitié. The nurses are taken from there to replace the religious nurses, whenever a fresh hospital is laicised. The post of superintendent of a ward is only confided to those who have obtained a certificate at the examinations, proving them competent to undertake such an office. The contract made between the Administration of the Assistance Publique and the religious orders which have hitherto supplied the hospital nurses gave the option to either side to annul the engagement if it appeared advisable.—*British Medical Journal*, February 11, 1888.

Ground-water and Health.—Mr. Baldwin Latham, C. E., declares, as the conclusion derived from eleven years of investigation, that there is generally a parallelism between the conditions of health and the volume of ground-water. The years in which there has been a large quantity of ground-water present have invariably been the healthiest years, while those in which there has been a small quantity have invariably been the most unhealthy periods. As a rule, the lowness of the ground-water indicates the future health, and not the state of health at the particular time of lowness; that is, the unhealthy period, as a rule, follows the period of low water, the degree of lowness indicating the intensity of future disease. In some instances an unhealthy period runs concurrently with the period of low water, but in all these cases there is clear evidence that percolation has begun before the unhealthy period comes on. These results, which are confirmed by observations made at Paris, differ from those obtained by Professor Pettenkofer, at Munich, in that he there found typhoid fever and low water concurrent; in all other respects they agree with his. There is also clear evidence, derived from experience in England, that the lowering of the subsoil water by artificial means produces a tendency to the development and dissemination of typhoid fever. It is clear, however, to the author's mind, that ground-water itself has no influence, either for good or evil, upon health, but that the lowness or highness of the water in the

ground is the index of conditions which greatly influence the health of all communities. We have periods of abundance of water, and periods of low water, with both healthy and unhealthy conditions. Ground-water has been shown by Professor Pettenkofer to be chemically more impure in periods of high water when the conditions were favorable to health than when there is a low state of the ground-water and a condition unfavorable to health. The records also show that we have periods when rain has started into existence malignant diseases; while, on the other hand, we have similar heavy rainfalls accompanied by a high state of public health. The records clearly point out that it is not one circumstance alone which produces disease, but that there are at least three factors concerned in the matter, especially in the case of typhoid fever, viz: the elements which produce disease, such as a polluted state of the ground; the conditions which are necessary for the development of disease, such as a period of dryness of the ground in those regions which water usually occupies, combined with a comparatively high degree of temperature; and conditions which will lead to the spread of the disease, such as the probable influence of a storm or rain in driving impurities out of the ground into our water supplies, or through the instrumentality of ground-air passing into our habitations, and its reception by a population which is in a condition to receive such germs of disease. If any of these conditions is absent, diseases like typhoid do not occur. It has been pointed out by Professor Pettenkofer that in those districts in which the rivers are held up at uniform levels by rains, the conditions are favorable to health, and cholera seldom becomes epidemic. This is corroborated in great measure by the state of health at seaside resorts, which being at the natural outflow for ground-water, and owing to the uniform height of mean tide-level are placed in a condition favorable to health.—*The Popular Science Monthly*, December, 1887.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE TWO WEEKS ENDING FEBRUARY 18, 1888.

WASDIN, EUGENE, *Passed Assistant Surgeon*.—Relieved from duty at Marine Hospital, Chicago, ordered to Marine Hospital, Mobile, Ala., February 16, 1888.

NORMAN, SEATON, *Assistant Surgeon*.—Relieved from duty at Marine Hospital, New York, to assume charge of the Service at Evansville, Ind., February 6, 1888.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING FEBRUARY 18, 1888.

OLCOTT, F. W., *Assistant Surgeon*.—Detached from the "Minnesota," and ordered to the "Atlanta."

HEYL, T. C., *Surgeon*.—Ordered to the Receiving Ship "St. Louis."

MARTIN, H. M., *Surgeon*.—Detached from the "St. Louis," and ordered to the "Swatara."

WEBSTER, CHARLES F., *Assistant Surgeon*.—Ordered to the Receiving Ship "Vermont."

FIELD, JAMES G., *Assistant Surgeon*.—Detached from the "Vermont," and ordered to the "Swatara."

WHITING, ROBERT, *Passed Assistant Surgeon*.—Detached from the "Iroquois," and ordered to Coast Survey.

TRACY, CLONER C., *Assistant Surgeon*.—Resigned, to take effect immediately.